PRINTING EQUIPMENT *Engineer*

An Industry-wide Technical Publication

november 1953

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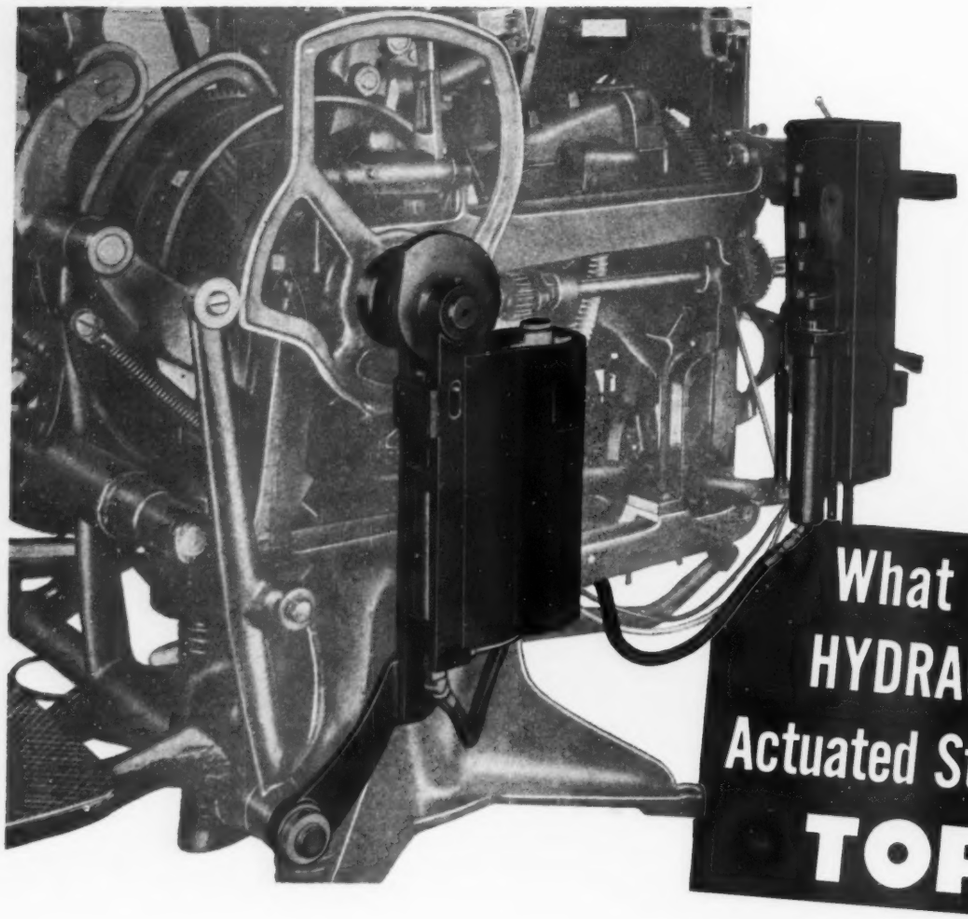

What Makes the HYDRAULICALLY Actuated Star Quadder TOPS?

Here are only 7 of the many features:

- The absence of slap as the Vise Jaws close on the matrix line due to the Hydraulic Unit.
- The exclusive basic principle of rack and gear train which keeps the Vise Jaw movement always in gear. No levers.
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- "No-set" Delivery Slide. An easily adjusted, rugged assembly which permits long finger to remain at 30½ picas regardless of measure changes.
- Minimum maintenance required—every part reached WHEN necessary.

There are many other features, too, which make this a profitable, fool-proof investment. Write today for complete details.

You can get all the advantages of the Hydraulically Actuated **Star** Quadder for **any** 30 pica Linotype or Intertype even if presently equipped with other inboard or outboard Quadders.

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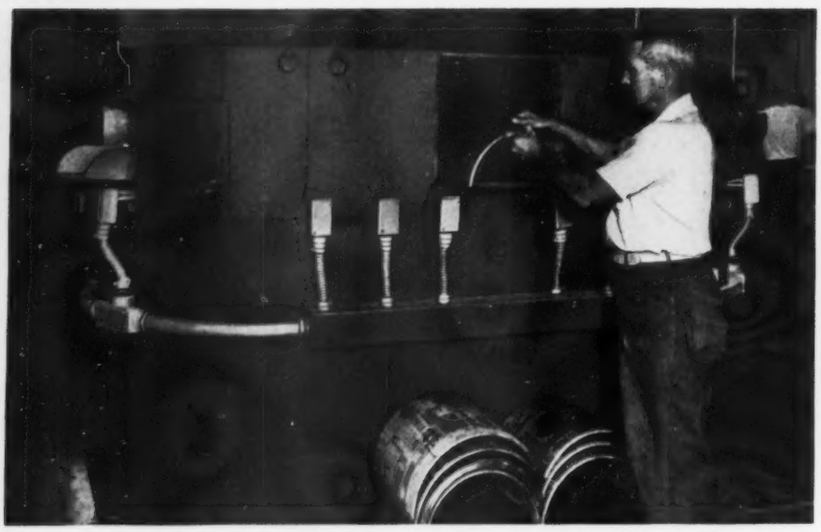
WHITTIER • CALIFORNIA

Equipment & Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT *Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Duraplate Photoengraving Metal

Imperial Type Metal Co. has announced a new photoengraving metal which has been named Duraplate. It is a zinc alloy of increased toughness to insure greater wear resistance. It is especially designed for extra-long press runs, printing on hard, rough stock, and for large quantity mat production. Alloyed in specially built low-frequency electric induction furnaces, states sponsor, this new engraving zinc alloy possesses a dense grain for fast etching. Other characteristics include ability to etch clean, greater resistance to buckling or distortion, and close register for color work. Available in all Imperial standard sizes, each sheet is acid-resist coated in an orange color. A four page bulletin in which Duraplate photoengraving metal is discussed is available. Please mention PEE No. 813 in your request.



CAPABLE OF PRODUCING METAL FOR 129 PLATES PER HOUR, the Patriot's new stereotype melting pot is equipped with 12 cast-in G-E Calrod immersion heaters.

HARRISBURG PATRIOT REPORTS:

Experience Proves Calrod* Heaters Best for Stereotype Melting

Twenty years of continuous service in the now outgrown Patriot plant proved Calrod heaters are dependable, easy to maintain, and provide cleaner, cooler working conditions. This convincing performance led to a similar installation in the new plant.

Today, more and more of the nation's daily newspapers are converting to G-E Calrod heaters for dependable, low-cost metal melting. Continuous operation is assured because individual heaters can be easily replaced without interrupting the melting process. Cooler, cleaner working conditions and minimum heat losses are additional advantages of applying electric heat directly to the metal.

You can convert to efficient Calrod stereotype melting over a weekend — without costly production delays. For the complete story, contact your nearest G-E Sales Office or write for Bulletin GEA-5453 to Sect. 720-116, General Electric Co., Schenectady 5, N. Y.

*Reg. Trade-mark of General Electric Company.

GENERAL ELECTRIC

Round Corner Cutting Machine—A power operated round corner cutting machine designed with top and bottom knives for clean cutting through a lift of stock has been introduced by Hambro Trading Co. of America, Inc. The motor is mounted directly on the base of the machine and the unit is equipped with a positive acting clutch. A complete range of knife sizes for the machine is also available. Please mention PEE No. 796 when requesting more details.

Downdraft Powdering Cabinet

Elimination of excess powder dust hazards in photoengraving operations without requiring installation of ducts and filters is the feature of a Downdraft Powder Cabinet, announced by Chemco Photoproducts Co., Inc. The cabinet is equipped with a suction fan which draws excess etching powder into Nylon bags.

An automatic 1 min. cycle shaker mechanism deposits collected powder at bottom of bags which, states sponsor, need be emptied only twice yearly under ordinary operating conditions. The cabinet is designed to provide unrestricted work visibility and houses the complete dust collection system.

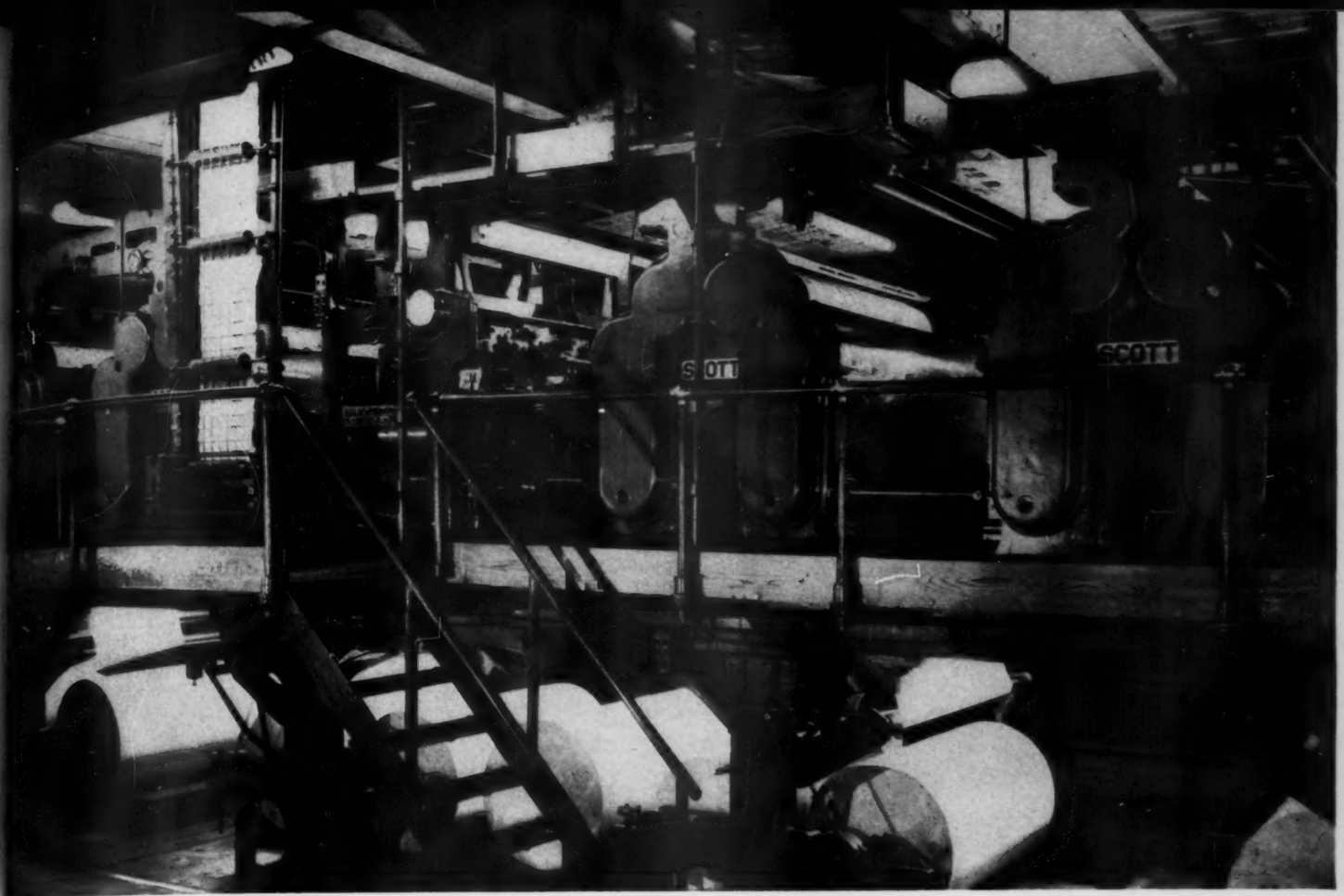
Chemco powdering cabinet which is equipped with suction fan for drawing excess etching powder into nylon bags.

Rubber edged powder tray sides are provided for plate protection. Other features of the cabinet include a utility shelf and storage drawer for tools or second powder blend. Working parts are accessible for inspection and maintenance by removing the front panel. Additional information is available by mentioning PEE No. 805 in your request.

Vacuum Blanket Printer

The Magic Hand vacuum printer is the subject of a four page, two-color bulletin issued by Peerless Photo Prod-

(*Continued on Page 8*)



Four-Unit, Mezzanine-type, Scott Extra High-Speed Press installation at the Stamford Advocate, Stamford, Conn.
(Stamford Advocate celebrating their 125th Anniversary in 1954.)

"— most in performance per dollar expended,"

WROTE KINGSLEY GILLESPIE, PUBLISHER OF THE STAMFORD ADVOCATE

Wherever Scott Presses roll, users agree with Mr. Gillespie, because for "Extra High-Speed" production, dependable performance and economical operation, Scott equipment has been demonstrating its superiority in daily service for almost a century.

The superlative performance of Scott Presses is due primarily to the technical excellence of their basic design. Fully counterbalanced cylinders and drive shafts, ground and polished "SKF" bearings, a lubricating system engineered to the special requirements of high-speed operation — these and many other features account for the smooth operation and long life of Scott Presses.

If you are planning a new pressroom, or preparing to modernize or expand present facilities, it will pay you to consult Scott on the latest and most modern in press design.

Buy with CONFIDENCE - - - Buy **SCOTT** 5-53-9

WALTER SCOTT & CO. INC.

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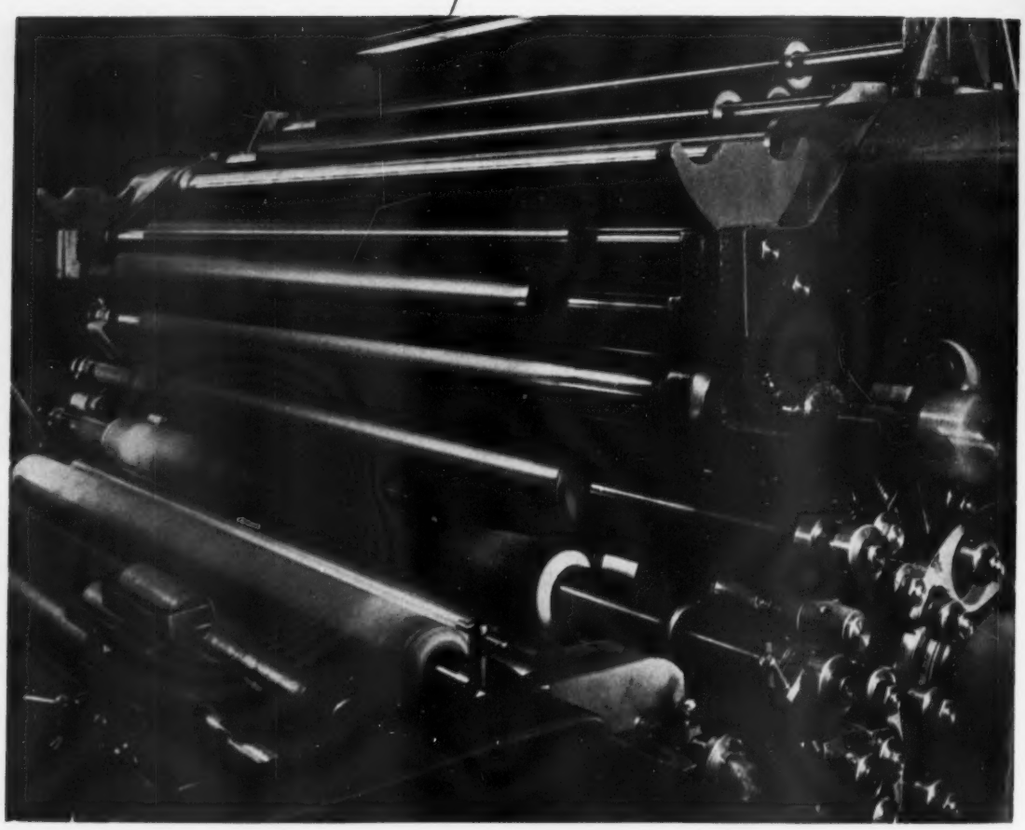
THEY GO TOGETHER

fine Rollers, fine Presses, fine Presswork



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PRINTERS' ROLLERS

New high speed presses, made with marvelous precision, are setting new standards of printing competition. To meet these standards, rollers must be equal in precision to the presses.

For over a century, SAM'L BINGHAM'S SON MFG. CO., has matched the improvement in presses by consistent improvement in rollers—Composition, Rubber and Vulcanized Oil.

Whatever your roller needs, for relatively slow or the newest high-speed multi-color presses, for offset, letterpress, aniline or rotogravure printing, it will pay you to send your rollers to one of Bingham's twenty conveniently located plants.

The Right Roller right away

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NOVEMBER 1953

PRINTING EQUIPMENT *Engineer*

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

Volume 84 **Number 2**

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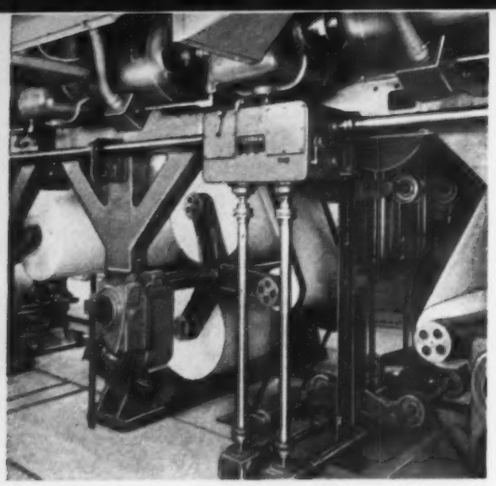

Cutler-Hammer Control for Unit Press Drive used on Goss Headliner Press in plant of **CANTON, OHIO, REPOSITORY**

This $600,000 seven unit installation has printing capacity of 45,000 copies of 56 pages per hour, an average delivery of 42,000 per hour. Space for expansion is provided at both ends. Color equipment is included.

You've seen it happen in your automobile. You *know* it is happening in the machines of industry. It is happening in newspaper presses too . . . the combination of more and more automatic functions into a given machine. You know too how desperately these press designers strive to simplify, simplify, simplify. The simplest possible means compatible with their ends is their goal.

It makes equal sense to seek out the simplest possible control of the simplest possible unit drive for this simplest possible press. And Cutler-Hammer Motor Control with a.c. wound rotor unit motors *is* the end of an such search.

This is a *paired* system . . simple, sturdy, trouble-free u a.c. wound rotor motors *pair* with Cutler-Hammer Unit Dri Control made up of simple, stu dy industrial type control co ponents known to every pla electrician . . . and together gi ing you the fundamental nee Easy inching and threading smooth acceleration to maximu press running speed, perfect sy chronization of motors, long li freedom from trouble, flexibili . . . all these are yours togeth with specific Cutler-Hamm superiorities. There's the ne

C-H can
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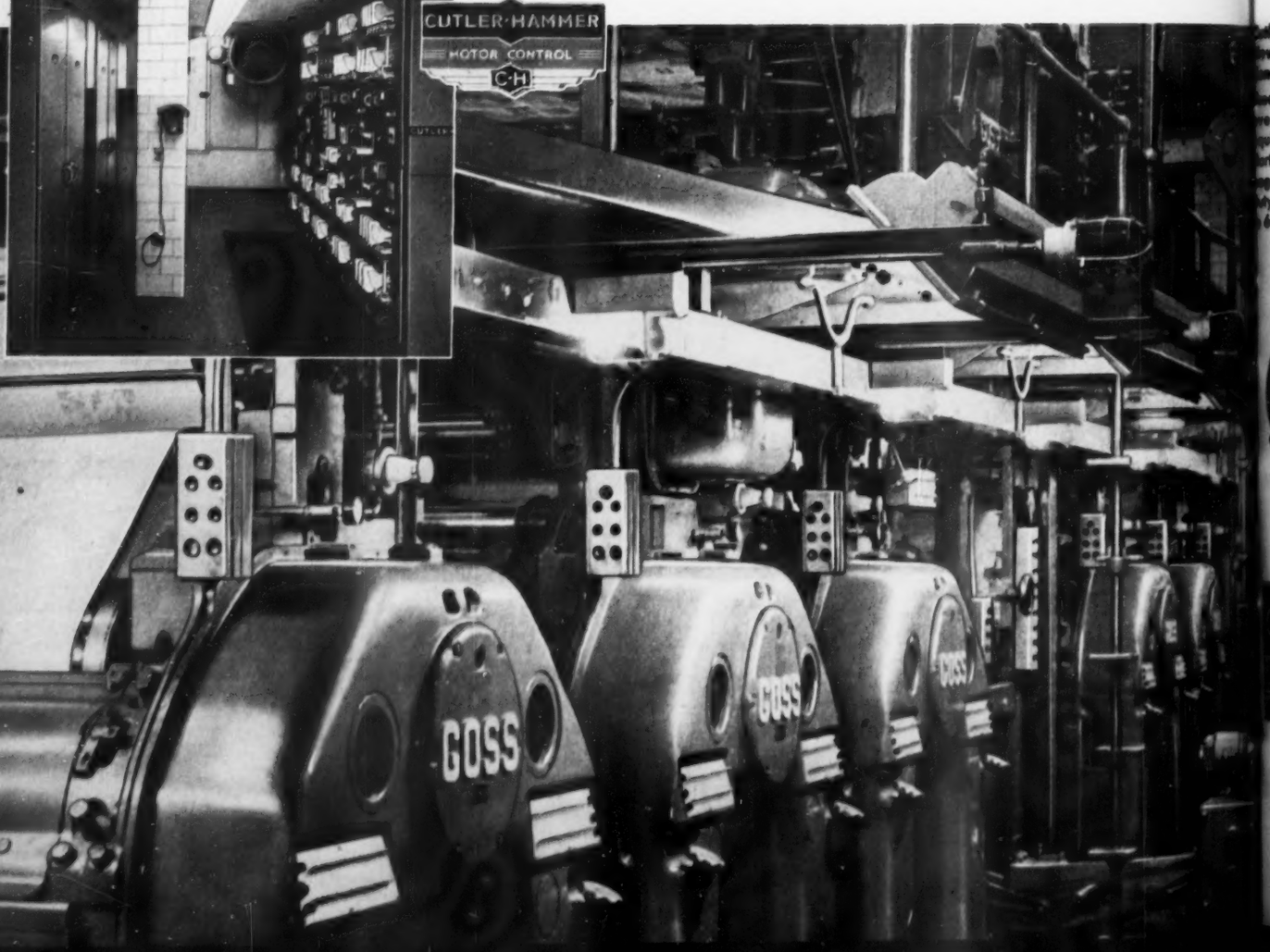


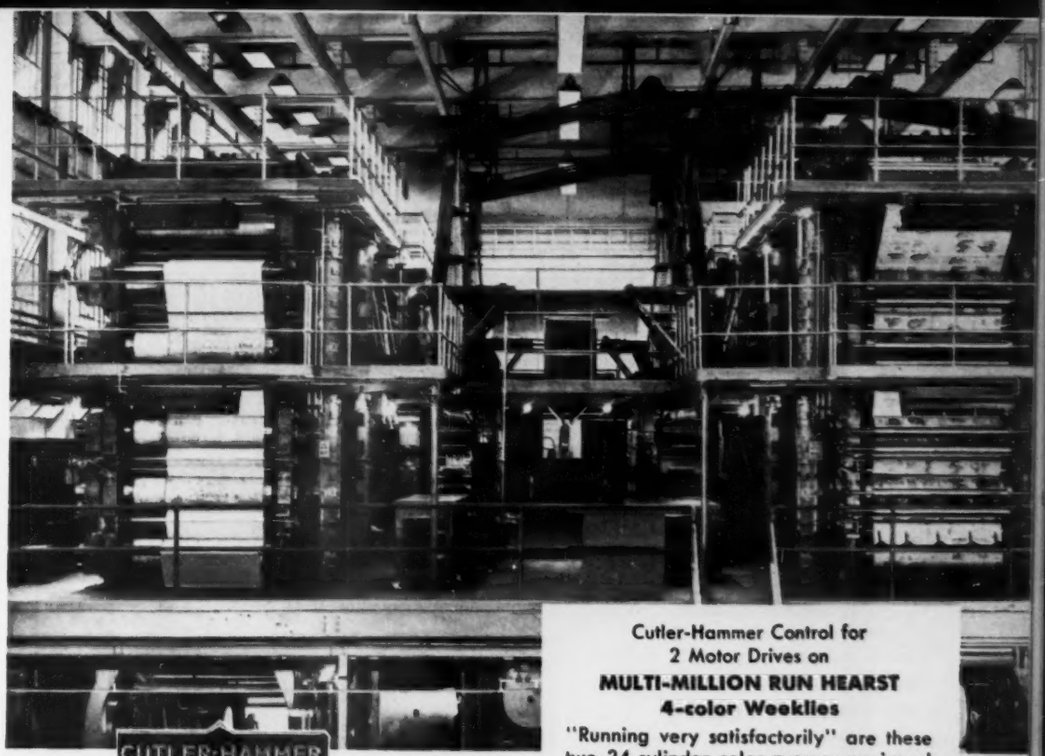
d economical unit drives

DY KEEP IT CUTLER-HAMMER

C-H cam drum accelerating device with 72 speed points. There's the fact that inching and threading *don't* draw current through the unit drive motors. There's freedom from troubles such as hanging load adjusting resistor switches, unbalanced loads, circulating currents and excessive peaks. *And your own electrician can service this drive and can service this control.*

The Cutler-Hammer Representative has a dramatic and compelling story to tell. See him before you buy.

CUTLER-HAMMER, Inc., 1460 St. Paul Ave., Milwaukee 1, Wisconsin.



Cutler-Hammer Control for
2 Motor Drives on
MULTI-MILLION RUN HEARST
4-color Weeklies

"Running very satisfactorily" are these two 24-cylinder color presses equipped with Cutler-Hammer Controlled Drives in the Hearst Color Plant at San Francisco. In addition there are four 24-cylinder presses identical with the above, in the Hearst plant in Chicago. Approximately 8½ Million copies of the Comic Puck Weekly are printed each week.

Cutler-Hammer Newspaper Conveyers

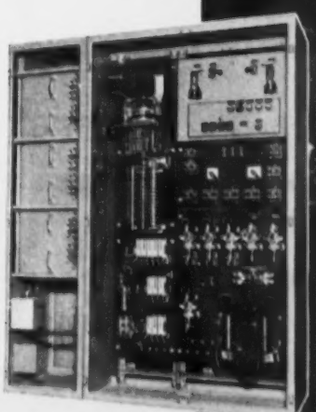
...ed in practically every conveyor-equipped plant in ...rth America. Standard Duty handles up to 56 ...ages at any speed up to 60,000 I.P.H. Heavy ...y handles up to 96 pages at any speed up ... 60,000 I.P.H.

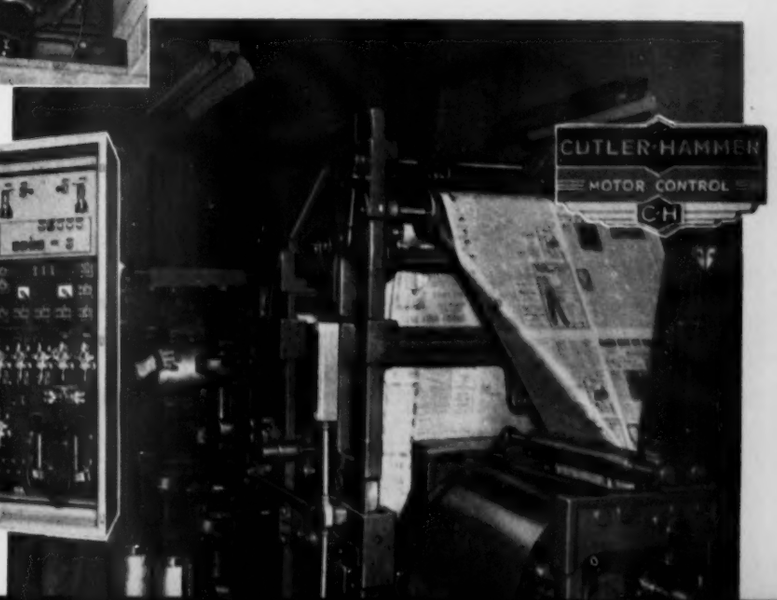
Cutler-Hammer Electronic Control for single motor drive on Goss Dek-A-Tube press in plant of
MADISONVILLE, KY., MESSENGER

"The whole setup is running smoothly, and we are looking forward to many years of satisfactory operation," says Edgar Arnold Jr., Assistant Editor.

Cutler-Hammer Cylinder Brakes

Stop presses safely in approximately 3 seconds, completely relieving gearing of excessive forces and harmful shocks. Each brake individually adjustable yet automatically coordinated with other brakes.





CUTLER-HAMMER
MOTOR CONTROL
C-H

Equipment & Supplies

(Continued from Page 2)

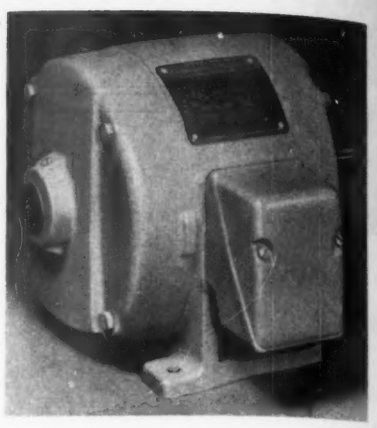
ucts, Inc. A feature of the printer is the Magic Hand rubber blanket which sponsor describes as simulating the human hand in smoothing down the copy material and holding it in register. Sponsor states this feature effects vacuum pickup inasmuch as the blanket squeezes out the air as it rolls over the material to be printed. The blanket is attached to the printer in two places—to the lid in front and to the main frame in the rear.

Another feature of the Peerless printer is its three separate lighting systems designed as follows: white for making positives from negatives; yellow for reflex printing; and ultra-violet for very dense negatives and its automatic exposure control.

The printer is available in three max. print area sizes as follows: 38 in. by 50 in.; 44 in. by 74 in.; and 50 in. by 98 in. Copies of this bulletin may be received by asking for PEE No. 792 in your request.

New G-E Motors

General Electric Co. has introduced a line of polyphase a.c. motors which it claims will provide more protection, efficiency and quieter operation. Called the Tri-Clad 55, the motors are said to have an average size reduction of 50% by volume and an average of 22 per cent less weight per horsepower.



A polyester film, claimed by G-E to be eight times as strong as previously used materials, is used to insulate the phases and slot tubes in the stator—the points of hardest wear. Sponsor further states the bearing assembly is more tightly sealed and is lubricated by a grease which lasts five times longer than formerly used lubricants. A double-end ventilation system cools the motor by drawing air in from beneath both end-shields, through baffled air passages and out louvers on the sides of the frame. Larger rotor fans increase the cooling air flow through the motor and dissipate rotor heat.

According to G-E engineers, the noise level of the new 10 h.p. motor tests as low as the former 2 h.p. model. Other improvements include permanently numbered, non-wicking connection leads; a larger diagonally-split conduit box; knock-off lugs on the end shields; and location of the combination nameplate-connection diagram directly over the box.

The new motors will become available in different sizes and models after the first of the year. Additional details may be obtained by mentioning PEE No. 802 in your request.

Color Measurement Instrument

A redesigned recording spectrophotometer for use in setting up standards to control the color of printing inks, paints, dyes and other materials has been developed by General Electric Co. According to G-E engineers, the instrument furnishes a color analysis by drawing a complete didymium curve in 54 sec. with photometric accuracy of 0.5 per cent, wave length accuracy within 1.0 milli-

(Continued on Page 10)

from composing room to pressroom

EASTERN *helps you get things done!*

Top quality products at economy prices, plus fast, accurate service—Eastern meets all these specifications necessary to help you get things done **profitably.** That's why hundreds of newspapers turn to Eastern as the dependable source for composing, stereo, engraving and pressroom supplies.

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- HI-SPEED ROSIN PASTE
- ROYLE ROUTING CUTTERS

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EASTERN NEWSPAPER SUPPLY, INC.

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"TIMKEN® bearings on rolls are an absolute must to get longest life from punches, dies, cut-off blades"... *says Hamilton Tool Co.*

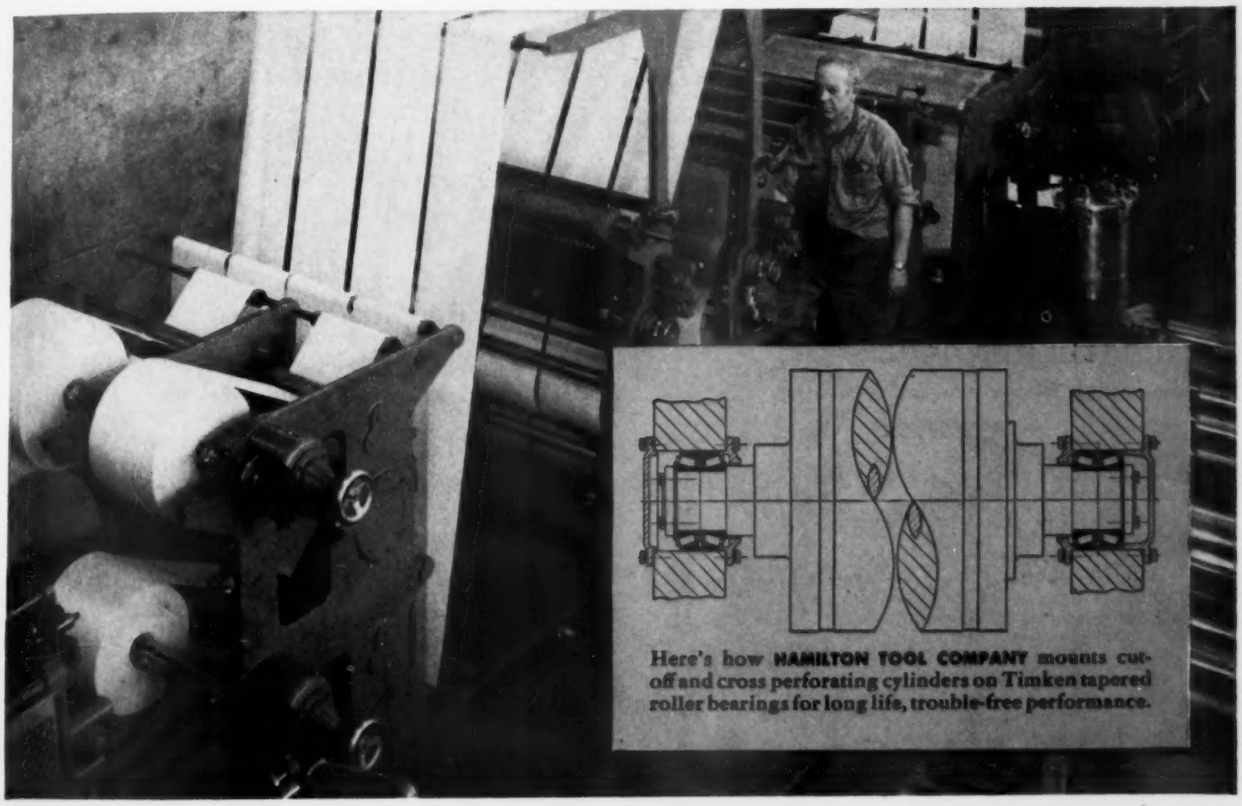
TO get longest life from punches, dies, and cut-off blades, The Hamilton Tool Company uses Timken® tapered roller bearings on the cut-off and cross perforating cylinders of its 4 web rotary printing press. The press prints, assembles, punches, cross perforates and slits 17" long business forms at a rate of 12,000 per hour.

Tapered construction lets Timken® bearings take any combination of radial and thrust loads, holds rolls in proper alignment, eliminates end movement of the cut-off and cross perforating cylinders. Result: wear on punches, dies, and cut-off blades is reduced. Timken bearings also take the repeated shock loads of the blades cutting 8 thicknesses of paper at extremely high speeds. That's because rollers and races of Timken bearings are case-hardened, have a tough, shock-resistant core under a hard, wear-resistant surface.

Timken bearings are also used on the worm drive, worm shaft and in the spiral bevel gear box to insure accurate gear mesh and a smooth flow of power. Their true rolling motion and smooth surface finish practically eliminate friction.

Be sure to specify Timken tapered roller bearings in the printing equipment you build or buy. Look for the trade-mark "Timken" stamped on every bearing. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.



Here's how **HAMILTON TOOL COMPANY** mounts cut-off and cross perforating cylinders on Timken tapered roller bearings for long life, trouble-free performance.

FINISHED TO CLOSER TOLERANCES

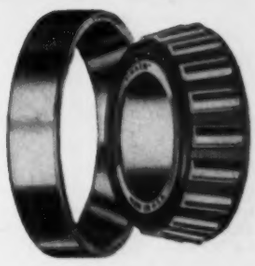
Finishing to incredible smoothness accounts for much of the precise, smooth rolling performance of Timken bearings. This honing operation is typical of the amazingly accurate manufacturing methods at the Timken Company.

The Timken Company is the acknowledged leader in: 1. advanced design; 2. precision manufacturing; 3. rigid quality control; 4. special analysis steels.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS



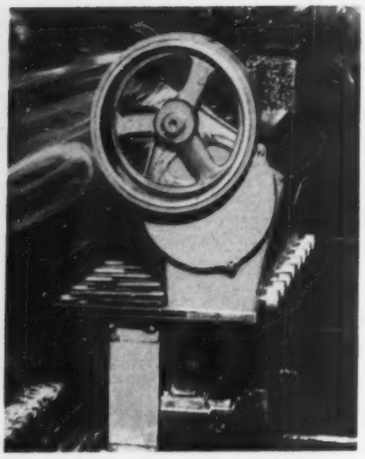
NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

"CAPCO" Portable Ink Fountain

INSTALLATION ON GOSS HEADLINER

St. Louis *Globe Democrat*

Weight Approx. 30 lbs.



- Provides COLOR efficiently.
- Increases production —affords pressroom savings up to 75%
- Saves time of pressmen—no costly installations
- Can be used on new or older equipment
- Easily operated and easily maintained

Let Us Tell You About the Many Other Features

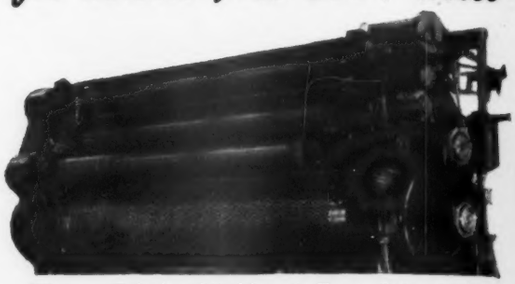
CAPITAL TOOL & MANUFACTURING CO.

5000 Calvert Road • College Park, Maryland

Phone: Union 4-7677

for low cost addition of third and fourth colors

for Miehle Flat Bed Presses



Western Printing Machinery's Extra Color Letterpress Unit for Miehle flat bed presses is the answer for low cost addition of third and fourth colors.

Precision built in several sizes, it will make a three or four color press of any standard 2-color Miehle flat bed. Production specifications are the same as the press to which it's permanently attached. Synchronization is perfect. Only minor changes are required for its installation.

This unit is low in cost and requires no additional floor space as it is mounted on top of the Miehle units. Operates efficiently and economically with the Miehle.

Write for further details.

WESTERN PRINTING MACHINERY CO.

3519 N. Spaulding Avenue

Chicago 18, Illinois

wpm

Equipment & Supplies

(Continued from Page 8)

micron and photometric precision within 0.2 per cent.

Sponsor states the spectrophotometer has been simplified so that a semi-skilled person can operate the equipment with relatively little instruction. Routine operation is largely automatic.

The device has been improved to include the use of a small Lucite cylinder in place of an opal glass plate to diffuse light over the phototube. Light is now passed directly to the phototube to increase total light available. Hard tubes have replaced thyratron tubes in the electronic system. The system is also now mounted on a single chassis for accessible servicing.

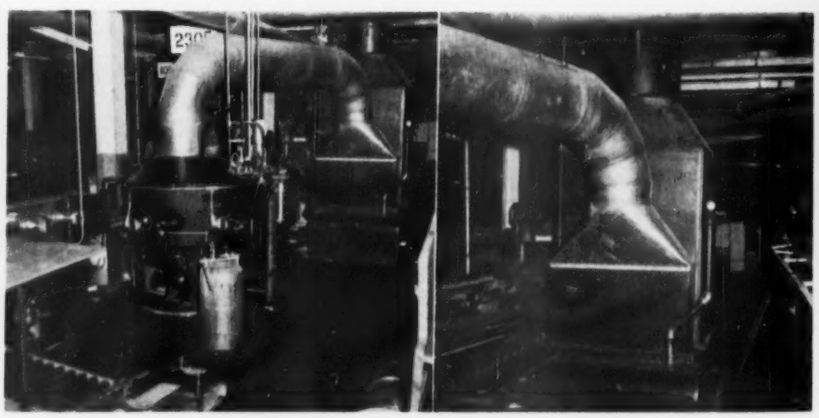
The apparatus is housed in a case measuring 45 in. by 26 in. by 19 in. Power requirement is 400 w., 115 v., 60 cy. Please refer to PEE No. 806 when writing for more details.

Applications for Flexographic Ink

Application of its recently developed high-gloss ink, Excellobrite, to flexographic printing of almost all coated Cellophanes, treated polyethylene film and aluminum foils, has been announced by Bensing Brothers and Deeney. Excellobrite ink has been found to give the same lustre to designs printed on polyethylene and foil as those printed on the face of Cellophane. According to BBD, the ink may be used without alteration on all three different types of stock and it can be handled on the press like the company's standard 400 Series Excellopake ink.

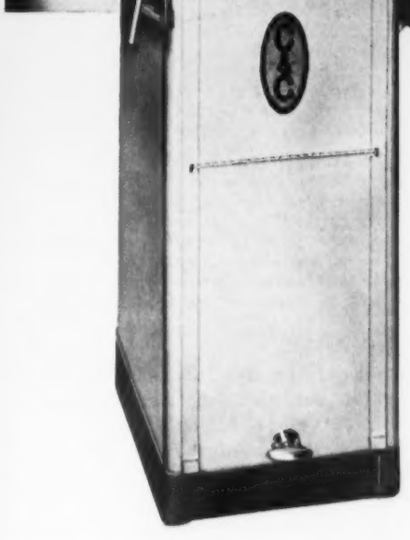
In printing aluminum foil, sponsor recommends that the high-gloss ink be used only as a background or first-down color, then overprinted with standard BBD Foilbrite ink. The company suggests that white, yellow or other suitable light shades be specified for Excellobrite when used as a ground color on foil. Please refer to PEE No. 803 when asking for more details.

(*Continued on Page 12*)



Air Treatment and Conditioning in Printing Plant—This equipment was recently installed by Paasche Airbrush Co. In the left illustration, the large circular unit in the center is an Automatic Book Edge Turntable Aircoating Unit. This unit consists of a 44 in. diam. steel turntable with motor. Air coating stations for airbrushes and an automatic air conditioner unit to provide clean, dry air in the airline, and special ventilating hood provided with openings at the coating stations.
The Airwasher unit is shown in picture at right and to right-rear in the left illustration. Excess spray and fumes from the coating stations are carried from the Automatic Book Edge Turntable Unit to the Airwasher. The fumes and excess spray are washed and cleaned in the Airwasher and all excess materials deposited in a settling tank. The cleaned air is then re-exhausted back into the room without any change in temperature or without any change in humidity. Detailed information will be furnished, but please mention PEE No. 789 in your request.

13 Morrison Saw Trimmers at Times-Picayune, New Orleans
No compositor has to walk more than a couple of steps to a saw trimmer in the modern Times-Picayune composing room. A Morrison trimmer between each two ad banks saves a lot of effort and time, and definitely speeds up production. It's good modern planning.



MORRISON 3-A SAW TRIMMER

A versatile time-and-money-saver in any composing room, Model 3-A is designed for greater accuracy, improved visibility and easier handling. Has popular "behind the gauge" workholder, 73-pica gauge, 135-pica extension gauge, miter and line-up gauge, right and left hand miter vise, saw grinder, trimmer grinder and other Deluxe equipment.

Other Morrison Equipment Includes: Slug Stripper, Plate Beveler, Router and Type High Planer, Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, and Jigsaw Blades.

Symbol of Operating Economy

THE MORRISON COMPANY MILWAUKEE WIS.

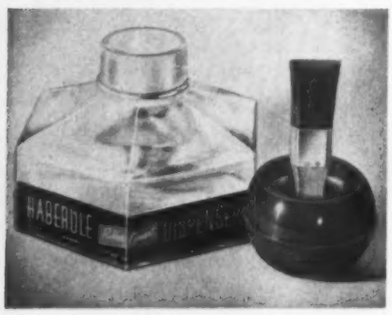
THE *Morrison* COMPANY
PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY
125 W. MELVINA STREET • MILWAUKEE 12, WIS.

Equipment & Supplies

(Continued from Page 10)

Adhesive Dispenser for Graphic Arts

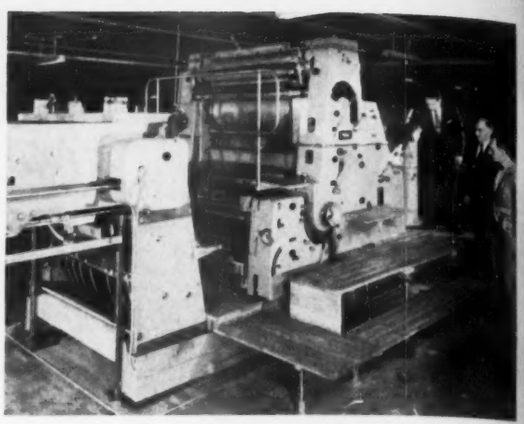
DESIGNED and made especially for Graphic Arts use, the Haberule Publishing Co. has announced the Haberule Rubber Cement Dispenser. Layout and markup men, artists, dummy pasters, editors, and others who prepare copy for the printer, and even the printer himself, will be pleased with the utility of the new container. The clear glass container



is hexagonal in shape and measures approx. 4¾ in. across the parallel sides; approx. height of dispenser from base to top of Bakelite cardinal red ball cap is approx. 4¾ in. The ball shaped brush cap is 2½ in. diam. The cap, it is announced, cannot stick to the container neck because there is no threading on bottle or cap, the cap fitting the neck by friction fit. The oversized pure bristle brush stands upright even on tilted drawing table or desk, as shown in the accompanying illustration. The brush always reaches the cement or other adhesive regardless of supply level within the container.

The user of this equipment has a feeling of security in knowing that the container cannot be tipped over accidentally; he also feels he is grasping something substantial when grasping the 2½ in. diam. Bakelite ball brush handle. Complete details will be furnished upon request, but please mention PEE No. 799 when writing.

Installs First Model of Miehle Press — The first Miehle No. 41 Two-Color Offset Press was recently installed at the plant of the Eldredge Company, Brooklyn, N. Y. Maximum sheet size for the No. 41 is 30 in. by 39 in. Shown examining the press, from left to right, are William J. Stevens, Miehle District Mgr. of Offset Sales; Frank H. Eldredge, President, and Herbert E. Eldredge, Vice Pres., both of the Eldredge firm.



Multipress Bulletin

The Model FM Multipress with Model K continuous feeder and extension delivery is illustrated and described in a four page, three-color bulletin prepared by B. Verner & Co., Inc. The Multipress is designed for flatbed and cylinder printing of envelopes, postcards, imprinting, tickets, tags, cartons, labels, etc., at claimed speeds of up to 6500 i.p.h. Features of the press are discussed in the bulletin and specifications listed. Please ask for PEE No. 791 when writing for this literature.

Vacuum Printing Frame

The Robertson Model J Vacuum Printing Frame is designed with a vacuum reserve tank which, according to Robertson Photo-mechanix, Inc., permits operation seconds after the frame is loaded. Vacuum pressure is maintained by an

(Continued on Page 14)

St. Petersburg Printer

INCREASES PRODUCTION 200%

With New Baumfolder!

ST. PETERSBURG PRINTING CO., INC.

September 10, 1953

"Dear Mr. Baum:

This is to thank you and your good associates for the prompt shipment of our new BAUMFOLDER. This came in time to handle a very important large job whereas the *element of time* in the bindery played an *important factor.*

Mr. Wilmot, the foreman of the bindery, set up the machine and folded the job in record time, in fact *it reduced the folding time by 200%.*

Needless to say, we are *delighted* with the *production* we are obtaining from your Folder.

Again thanking all of you and with kindest personal regards, I remain

Very truly yours,

BEN GRANGER"

RUSSELL ERNEST BAUM, INC.
615 Chestnut Street, Philadelphia (6) Pa.

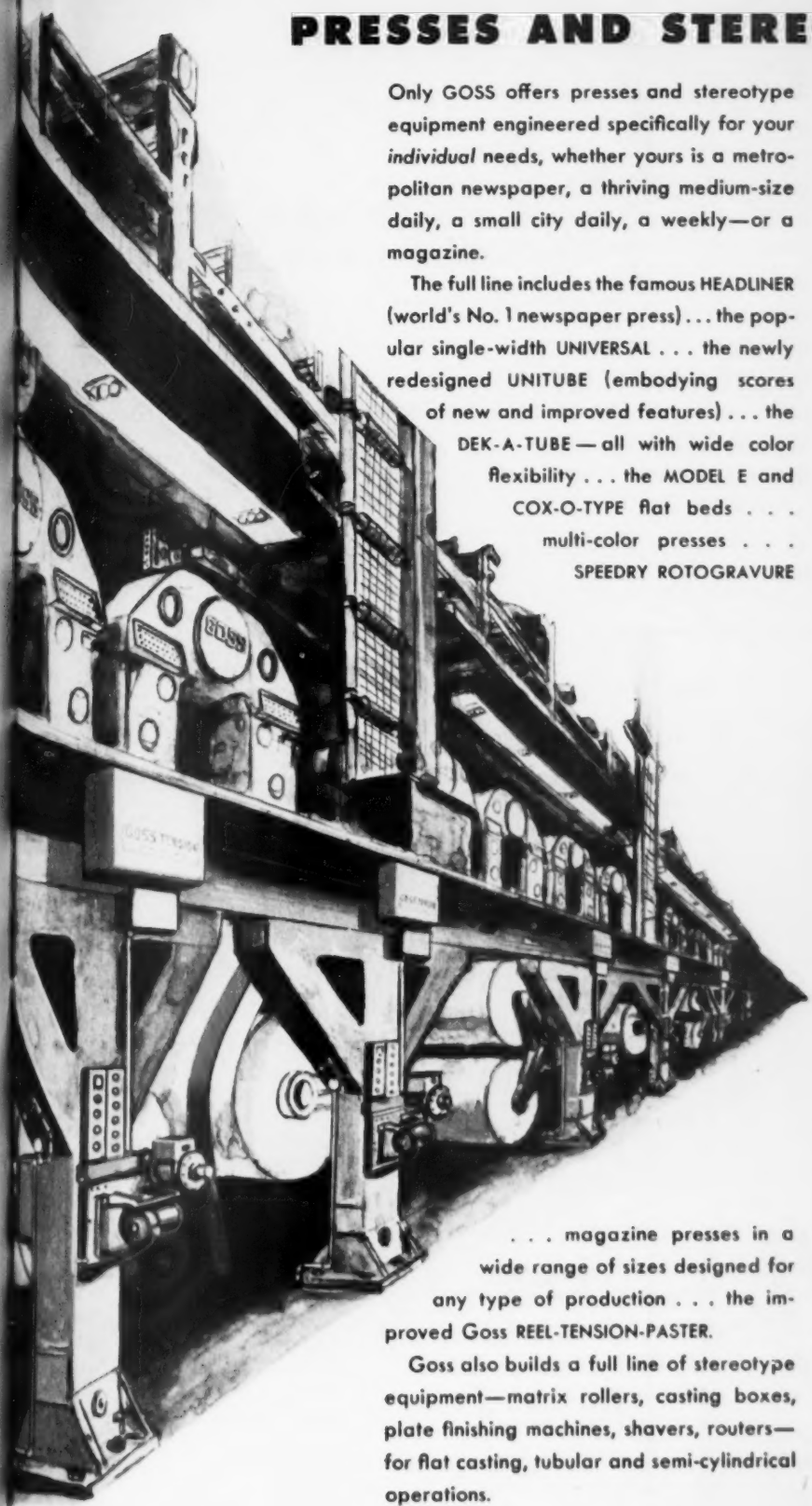
Mr. Ben Granger, Vice President & General Manager of St. Petersburg Printing Co., Inc. writes September 10th, 1953:

- The St. Petersburg *Times* recently wrote: "At the reception given by the St. Petersburg Printing Company recently the Rambler (Archie Dunlap, Dean of Florida Newsmen) could not help but compare conditions locally today and just a few years ago. St. Petersburg Printing Company, with its *big plant* and *modern equipment,* is turning out work that formerly could be done only in some Northern city. It used to be that anybody in St. Petersburg who wanted a big printing job done had to send it away but now jobs come to the local company from a wide area of the South.
- Telephone directories for St. Petersburg and other West Coast cities are done in this plant. Few plants in the South are able to handle such big jobs. Printing and binding the St. Petersburg telephone directory is in itself a huge task. However, *remarkable machines that appear to be able to think make it possible to turn out the directory quicker than most persons would believe possible.* The new directory is now being prepared and will be ready for distribution January 1."

1954 COMPETITION is going to require . . . "remarkable machines that appear to be able to think" . . . like the many-purpose, many-profit JET Model BAUMFOLDERS. We are proud to still offer the world's greatest Folder VALUE . . . at close to pre-war prices.

COMPLETE

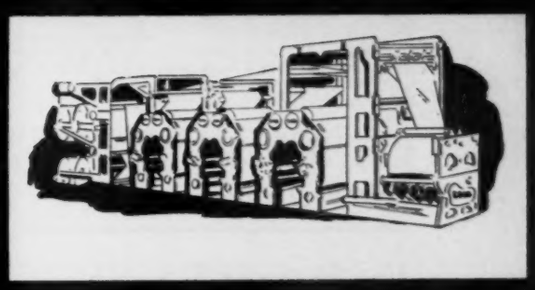
PRESSES AND STEREO

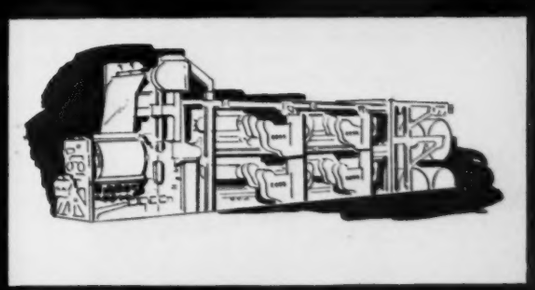


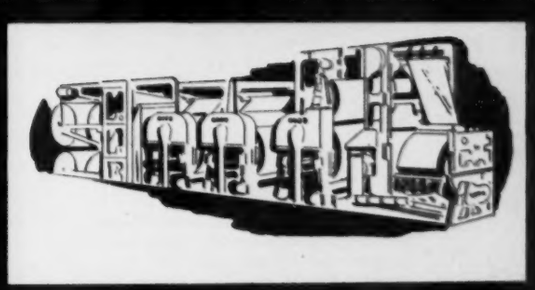
Only GOSS offers presses and stereotype equipment engineered specifically for your *individual* needs, whether yours is a metropolitan newspaper, a thriving medium-size daily, a small city daily, a weekly—or a magazine.

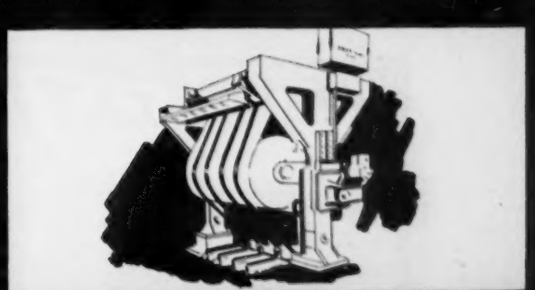
The full line includes the famous HEADLINER (world's No. 1 newspaper press) . . . the popular single-width UNIVERSAL . . . the newly redesigned UNITUBE (embodying scores of new and improved features) . . . the DEK-A-TUBE — all with wide color flexibility . . . the MODEL E and COX-O-TYPE flat beds . . . multi-color presses . . . SPEEDRY ROTOGRAVURE . . . magazine presses in a wide range of sizes designed for any type of production . . . the improved Goss REEL-TENSION-PASTER.

Goss also builds a full line of stereotype equipment—matrix rollers, casting boxes, plate finishing machines, shavers, routers—for flat casting, tubular and semi-cylindrical operations.









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New York 17, New York

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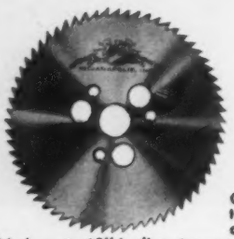
WORLD'S LARGEST MANUFACTURER
OF NEWSPAPER, MAGAZINE
AND ROTOGRAVURE PRESSES



FREE

SAW BLADES

NO KIDDING!

Our saw sharpening coupon books contain a profit sharing coupon! Three such coupons are good for a brand new saw blade up to 10" in diameter—worth $4 to $7, depending on size. On top of this—our coupon books save you 7½% on sharpening costs; less than 75c per blade, return postage paid. Your saws sharpened BETTER—or else. 24-hour service. 25 years of experience. A 2c post card brings details.

AUTOMATIC SAW SHARPENING CO., INC.

735 E. OHIO STREET INDIANAPOLIS 2, IND

SMOOTH·DEPENDABLE·ACCURATE

VARIABLE SPEED CONTROLS for ROTARY PRESSES

Get the RIGHT Control to meet your needs! Very small space requirements. There's an exact type to give you the most for your money.

Write for complete details

Pantone ENGINEERING & MFG. CO.

5541 WEST MONROE STREET • CHICAGO 44, ILL.

Equipment & Supplies

(Continued from Page 12)

automatic switch that actuates the pump and motor unit at a fixed pressure that may be adjusted to individual needs. This switch automatically starts and stops

the pump and motor unit whenever the predetermined pressure levels are reached. A pressure release valve on the control panel permits bleeding either the frame or tank, or both.

Another feature of the machine is the counter-balanced glass lid. A positive locking device on the lid prevents the frame from opening when in a vertical position. The frame is mounted on the base for convenient movement into vertical position for the exposing operation. Other features include a utility drawer and 15 min. bell timer. The ¼ h.p. pump and motor unit are cushion mounted. All vacuum connections are sealed to prevent leaks and pressure drops.

A Model JE, of the same construction as the Model J, is available without the vacuum reserve tank, vacuum control switch, drawer and timer. If you desire further information, please mention PEE No. 794 in your request.

Nylon Faced Hammer

A hammer with a Nylon face, which the sponsor claims will not injure type or plate, has been reported by Frank M. Galvin, Inc. To be known as the Dead Blo Hammer, sponsor states a direct blow may be delivered with the tool without any rebound. It can be used for straightening plates without injuring the face of the plate. The hammer may also be used for planing down type forms without the need of a planer. Other information will be supplied on request by asking for PEE No. 804.

Platemaking and Photocopying Machine

The Lacey-Luci Platemaker & Photo-Kopier is designed for both burning-in pre-sensitized and other types of sensi-

(*Continued on Page 18*)

Milwaukee-Racine Craftsmen Elect New President—H. Win Brooks (left) receives gavel as newly elected president of the Milwaukee-Racine Club of Printing House Craftsmen from Past Pres. Gilbert LaVesser. Brooks is Vice President of the Wells-Badger Corp., Milwaukee. LaVesser is President of Bookcraft, Inc., Milwaukee. Other officers installed at the September meeting include: John Krautschneider, Arandell Litho, Milwaukee, auditing board; Clifford Helbert, Marquette University Press, First Vice Pres.; Edwin Bachorz, Western Printing & Litho Co., Racine, Second Vice Pres.; Henry Kutsche, E. F. Schmidt Co., Milwaukee, Treas.; Lavine Jacobson, Olsen Pub. Co., Milwaukee, Secy.

Self Spraying **STATIKIL** TRADE MARK

PRESS BUTTON AND SPRAY

For Relief from

STATIC ELECTRICITY

$3.00 PER CAN

Just Write **STATIKIL**

1220 W. 6th ST., CLEVELAND 13, OHIO

CHAS. T. MAIN, INC.

COMPLETE SERVICES

for

NEWSPAPER AND PRINTING PLANTS

Layouts, Designs, Specifications and Supervision of Construction

Walter E. Wines **Consultant**

80 Federal Street, Boston, Mass.

317 South Tryon Street, Charlotte, N. C.

What would you look for in buying a job cylinder press?

Henry M. Newman is president of the McKenzie Service, Inc., in New York, the world's largest imprinters.

Here's how the president of the world's largest imprinting service answers that question:

"We always look for the following: *versatility* in handling a large variety of stocks and sizes, *quick getaway, quick change* of type or forms, low *upkeep,* and *high production.* And even though we specialize in imprinting for the trade, our presses must often turn out fine printing quality over a full 12" x 18" form. That means we need good *distribution.*"

McKenzie Service, Inc., has been operating Little Giants for 25 years; now has 18 of them.

And here's how ATF's Little Giant measures up to Mr. Newman's check-list:

ATF's Little Giant covers a full range of sizes and stocks from tissue up to four-ply card. Quick makeready, getaway and changeover are also easy. It will cruise with any job cylinder on the market and produce at the lowest cost per thousand impressions.

But for finer distribution the Little Giant has three form rollers plus three gear driven vibrators and two distributor rollers, more than any other press in its size range.

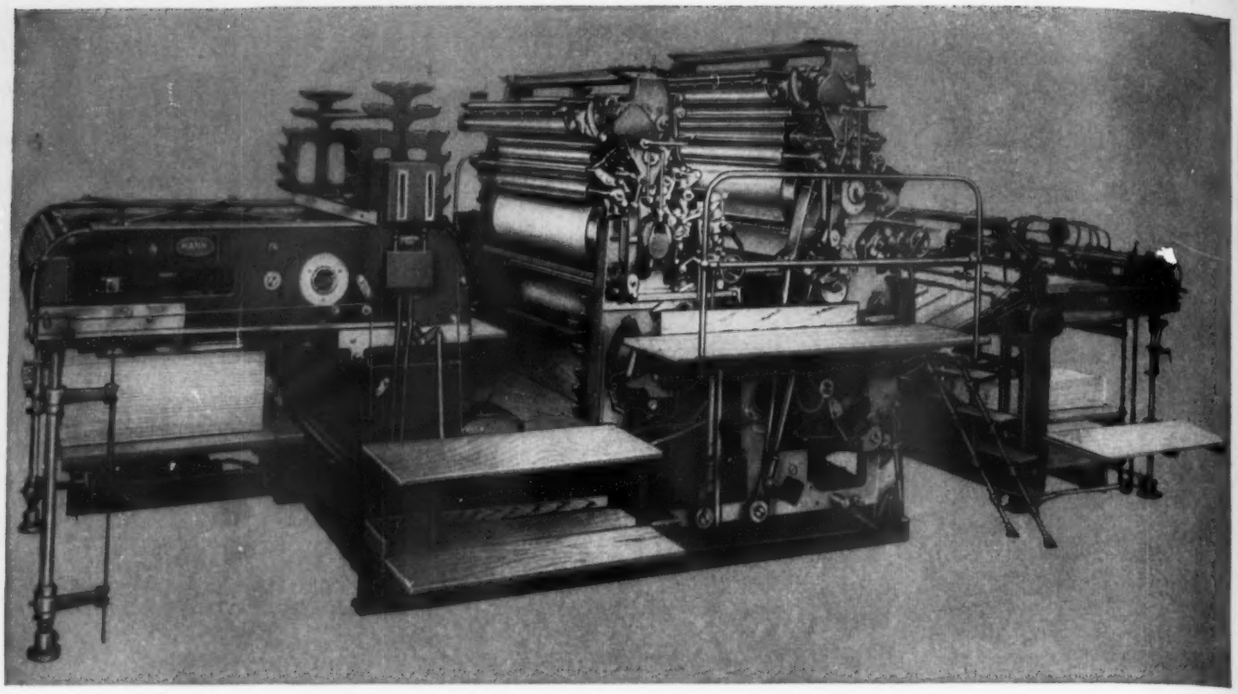
There are many good presses on the market today, but if you'll check them all, on these same points, we think you'll decide on the ATF Little Giant.

Write today for the complete story on the Little Giant 6. AMERICAN TYPE FOUNDERS, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

Type faces shown are: Tower, Stymie Medium, Century Bold Italic, Century Expanded, Alternate Gothic No. 2, Spartan Medium.

ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES...GRAVURE...LETTERPRESS...OFFSET



"Our ATF-Mann gives us top quality two-color register...even at top speeds"

That's what you'll hear from printers who own or run an ATF-Mann two-color press. And here's why they do get perfect register every time:

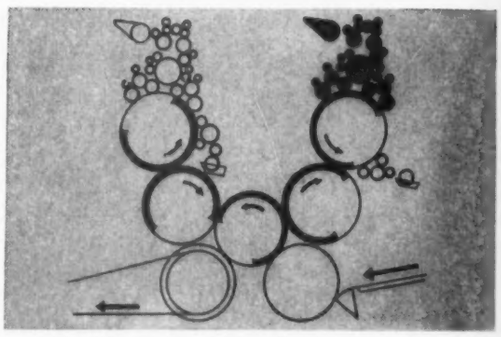
First, the ATF-Mann feeds press sheets in a smooth *overlapping* stream at *one-fourth* press speed. This allows each sheet more time at the front guides for register—and eliminates any bumping of the feed edge of the sheet.

Second, the ATF-Mann's exclusive Swing Feed takes the sheet from the front guides at a dead standstill and smoothly accelerates it to the speed of impression cylinder. Swing Feed grippers do not release sheet until *after* the next set of grippers have closed on it and both sets of grippers have traveled $^{3}/_{8}$ of an inch.

Third, both color impressions are made while the sheet is positively held by a single set of grippers (see diagram at right). There is no transfer of the sheet between impressions.

Fourth, the massive, balanced, rigid construction of the ATF-Mann prevents vibration, deflection or distortion which would throw off register at high speeds.

This sustained register and other exclusive features of the ATF-Mann make the very finest lithographic reproduction possible even at high-production speeds. Write American Type Founders, *a subsidiary of Daystrom, Inc.,* 200 Elmora Avenue, Elizabeth, New Jersey.



SUPERIOR INKING UNITS of the Mann two-color press are designed to give superb coverage, perfectly controlled. 26 rollers in each unit provide more square inches of ink breakup than any other press, size for size.

FLOATING IMPRESSION, essential for the finest offset reproduction, is obtained on ATF-Mann presses by the elimination of bearer-to-bearer contact, use of double blankets, large precision ground helical gears, and an exclusive method of paralleling cylinders.

Ask the man who owns a Mann—he'll tell you it pays to buy the finest

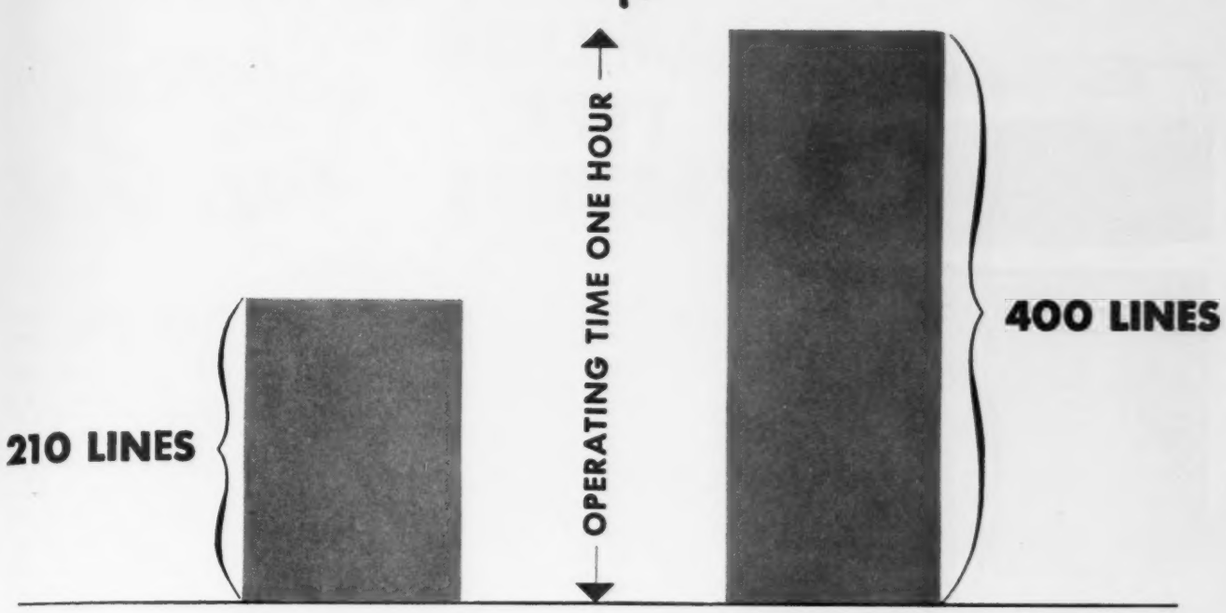
Type faces shown are: Bodonis, Spartans, Dom Casual, Alternate Gothic No. 2.

ATF

Better, more profitable printing from the widest line of processes...

GRAVURE...LETTERPRESS...OFFSET

This is how TELETYPESETTER can set more type at less cost:



Less cost? Those two words sound good to anybody – especially anybody in the printing or publishing business. You don't have to be reminded that costs are *up*.

But for a moment, let's consider one specific cost – your composing cost. You know that it's one of your biggest. And that is where TELETYPESETTER comes in.

For with TELETYPESETTER automatically operating your composing machines, you can save up to 40 per cent in composing costs. And in many cases *more*.

The TELETYPESETTER system is very simple. It consists of a perforating unit – which punches tape – and an operating unit which attaches to your composing machine. A touch-typist can punch tape on the perforator – to the tune of 400 actual lines per hour or more. The tape is fed into the operating unit, either as it is punched or at a later date if you desire. And that tape will automatically operate your composing machine at 400 or more lines per hour on a standard composing machine, 600 or more lines per hour on a high speed machine!

Think of the advantages: during rush periods, composing time can be cut in half. If overtime is needed, tape punched during the day *at daytime rates* will operate your machines at night! During slack periods, tape for the future can be punched and stored until it is needed.

Cost? TELETYPESETTER's cost will come as a pleasant surprise. A set of equipment ready to operate is under $4000.

Would you like more specific information? Just fill in and send us the coupon below.

TELETYPESETTER CORPORATION, Dept. PE-11
2752 N. CLYBOURN AVENUE
CHICAGO 14, ILLINOIS

Do you publish a daily? ☐ A weekly? ☐
Do you do job printing? ☐
How many composing machines do you have? _____
Are they standard ☐ or high-speed? ☐

Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____

TELETYPESETTER

From SHRDLU to PROFIT with HAMILTON TYPE CABINETS

Complete Hamilton type cabinets can be assembled from independent units—bought separately as work requirements increase.

You'd never set a *shrdlu*, of course. But many costly composing room mistakes or delays *can* be ended, by using only Hamilton type cabinets—the equipment with built-in efficiency! These steel bodied cabinets are so skillfully designed for faster, smoother, error-less work—with every feature possible for increased convenience—that costs naturally head down, profits *up*. See your Hamilton dealer now for equipment that takes on *any* composing room load and makes it pay!

Easier to see

Over-head, over-case fluorescent light gives brilliant low-cost illumination, speeds up type setting or distribution.

Easier to read

Extra large combination pull and label holder permits reading of even lowest type case labels from standing position.

Easier to reach

All Hamilton type cabinets have 4-inch extension front for easy access to all compartments of type cases.

Easier to compose

Time-saving 24-inch stainless steel rule on left front corner of all single tier working tops; two with double tier tops.

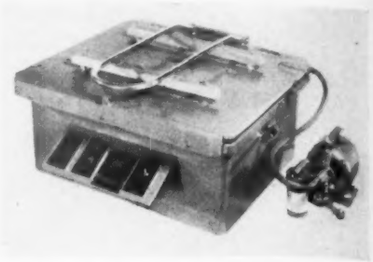
Hamilton equipment

HAMILTON MANUFACTURING COMPANY
TWO RIVERS, WISCONSIN

Equipment & Supplies

(Continued from Page 14)

tized printing plates, as well as for making contact and reflex negatives and photocopies, according to Merritt Lacey



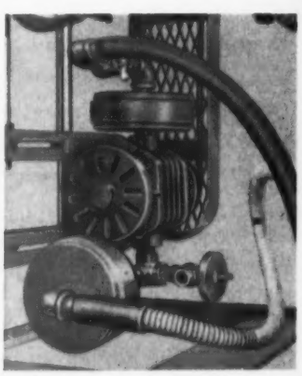
Corp. In addition, the unit may also be used as a light table for stripping, positioning of negatives, etc.

Sponsor claims a pre-sensitized plate can be burned-in on the unit in 90 sec. The lighting system consists of eight 24 in. long, 20 w. blacklight tubes. Working area of the unit measures 18 in. by 24 in.

It is equipped with a Gast vacuum pump and motor which are removable for other shop uses. The automatic timer from zero to 3 min. is calibrated in seconds and minutes and has an automatic reset. The Lacey-Luci unit measures 24 in. by 28 in. by 19 in. high. Further details may be obtained by mentioning PEE No. 800 in your request.

Pump Kits for Folders

The Dexter Folder Co. has announced the availability of pump kits for use on Cleveland or other makes of suction fed folders. The kit consists of a Dexter-Conde Dri-Air pump, filters, muffler, pulleys, belts and pipings, fully assembled



and mounted on a board ready for installation. Four sizes are available to cover current types of folder. Pulley sizes are based on a motor speed of 1750 r.p.m. Pulleys for 1450 r.p.m. motors are also available.

The Dri-Air Pump is provided as standard equipment on all Cleveland folders. It is of the oil-less type. Carbon graphite alloy blades are claimed to be stick proof and chemically inert. When asking for additional information, please mention PEE No. 812.

(*Continued on Page 21*)

why BEST PRINTING CO. BOUGHT THEIR HEIDELBERG FROM A DEMONSTRATION AT THEIR DOOR

They compared. They found only Heidelberg has ALL the features for MAXIMUM PROFIT. They bought the best—the fastest, most versatile, money-makingest automatic platen in the world. They got more profit punch per dollar. No after-thought gadgeteering. Not one red cent for extras, even for profit-doubling, two-up attachment. See for yourself. Write today for a FREE DEMONSTRATION!

Actual photos of Best Printing Co's partners—(top photo)—partner T. Boggio, shown at extreme right (close-up photo) Floyd J. Lender

ORIGINAL HEIDELBERG
... THE BEST THING NEXT TO A PRINTER!

Distributors of Heidelberg Automatic Presses

HEIDELBERG WESTERN SALES CO.
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227 North 3rd St., Columbus 15, Ohio

HEIDELBERG SOUTHERN SALES CO.
120 N. Sampson St., Houston 3, Texas
220 Courtland N.E., Atlanta, Georgia

The Compliments Continue to Pour In!

We've shown you some of the comments from the lithographers, printers and platemakers who are so satisfied with their

Strong GRAFARC LAMPS

Here are a few from publishers and leading industrialists who give you more reasons why you too should own these wonderful lamps.

"Highly efficient and requires no service."
—ANOTHER OF AMERICA'S LEADING INDUSTRIALS.

"Have only high praise for this lamp. There is nothing in the area that can touch it for coverage and detail."
—A TAKOMA PARK, WASHINGTON PUBLISHER.

"Exposure time on photo-composing plates has been cut in half and with less than perfect contact, a good image is still retained. With the conventional lamps, poor contact would cause the loss of the image due to undercutting."
—ONE OF AMERICA'S LARGEST INDUSTRIALS.

"We have been able to shorten the time of exposure approximately 50% on both camera and monotype composer."
—A PORTLAND, OREGON INDUSTRIAL.

"Our experience has been good, particularly in the reduction of exposure time by approximately one-half, and in a complete trouble-free operation without shut-down time."
—A LEADING MAP MAKER.

"It has most certainly exceeded our expectations. We are using the lamp for vacuum frame and very large lens work, which requires especially strong and even lighting."
—AN ATLANTA BLUE PRINT COMPANY.

"The best lamp of its type presently available."
—A CLEVELAND MANUFACTURER.

"We are very happy with them. On the camera we get much better coverage, and have been able to cut our exposure considerably. The exposure in plate-making has been cut just about in half. The motor driven carbons help to maintain a more uniform light. Should we need a new arc light, I'm sure it would again be a Strong Grafarc."
—A BLOOMINGTON, ILLINOIS PUBLISHER.

"We are very pleased with the performance of this lamp. Our exposures are much shorter than usual. The principal feature which appeals to us is the carbon feed, which makes adjustments unnecessary."
—ONE OF AMERICA'S LEADING INDUSTRIALS.

"More than met our expectations. Has operated smoothly and efficiently from the day we installed it. The lamp has SPEEDED UP considerably PRINTING TIME in our department, and any equipment that will save you from one to three minutes a plate on five to twelve plates a day, soon amortizes itself in these days of high labor and production costs. Our previous printing lamp was somewhat antiquated, and need I tell you what a relief it is to know that NO LONGER DO WE GAMBLE ON FAILURE DURING PEAK RUSH PERIODS in our shop."
—A CHARLESTON NEWSPAPER PUBLISHER.

For control that improves quality, intensity that speeds production, efficiency that saves you money, install Strong Grafarc Fully Automatic High Intensity Arc Lamps.

Models for all photo-mechanical reproduction processes.

Use coupon now to obtain prices and complete literature.

THE STRONG ELECTRIC CORPORATION

307 CITY PARK AVENUE
TOLEDO 2, OHIO

Please send free literature and prices on the complete line of Strong Grafarc Lamps.

Name _____

Firm _____

Street _____

City & State _____

Name of Supplier _____

*Names of these customers on request

Equipment & Supplies

(Continued from Page 18)

Small Material Mover

Western Gear Works has introduced a device known as the Tug Bar which may be used for moving loads in excess of 2 T. The unit, which weighs 110 lbs., comprises a reduction gear powered by either a.c. or d.c. type motors mounted on wide driving wheels. Operating controls are located on the adjustable handle attached to the unit. Sponsor states the Tug Bar can be operated wherever there is room for a man to stand. It is designed with two types of lips which are used in different applications. More details are available by asking for PEE No. 810 in your request.

The Tug Bar is shown being used for moving crated machinery from a confined space to a new location.

Monomelt Presto-Caster — The Monomelt Company has announced the manually operated Presto-Caster for backing up electrotypes under pressure. According to Chesley Carlson, Monomelt Sales Mgr., the Presto-Caster uses the pressure casting system to insure flat casting and improved printing surfaces. Please refer to PEE No. 811 if you desire more details.

Non-Blooming Rubber Printing Compounds

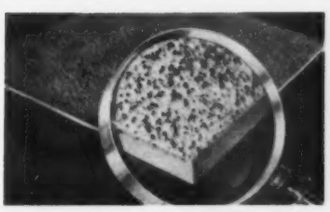
Unvulcanized crude rubber printing compounds, claimed to eliminate sulphur bloom, increase plate life and reduce curing time up to 30%, have been developed by B. F. Goodrich Co. The series

(Continued on Page 22)

Ink mist creates a slipping hazard on *any* conventional pressroom floor. So, when the St. Petersburg (Fla.) Times recently doubled the size of its pressroom, it replaced old-fashioned, unsatisfactory flooring with non-skid ALGRIP Abrasive Rolled Steel Floor Plate. "Completely satisfactory," the Times reports.

Besides non-slip foot safety, one of the best things about ALGRIP is its ability to pay for itself in lowered insurance rates. Compensation premiums, geared to accident rates, are bound to shrink when slipping accidents decrease. And that's inevitable when you install ALGRIP. Reason: ALGRIP's unique construction—with tough, abrasive "grinding-wheel" grain rolled uniformly into steel plate's upper portion. It's virtually impossible to slip on ALGRIP; *hundreds of tiny safety brakes in every footstep* make it anti-skid—even on steep inclines!

Get your *savings from safety*—starting now. Send for our new Booklet AL-33 on long-wearing, breakage-and-fire-resistant ALGRIP. Ask any questions you wish; we'll be glad to answer them.



RECENT INSTALLATIONS—Here are a few recent installations: Plain Dealer, Cleveland, Ohio • Seattle Times, Seattle, Washington • Beaumont Enterprise and Journal, Beaumont, Texas • Washington Times Herald, Washington, D.C. Also many others, names furnished upon request.

◀ Magnification shows even distribution of abrasive grain.

THERE'S NEVER A SLIP ON A. W. ALGRIP

Over 125 Years of Iron and Steel Making Experience

ALAN WOOD STEEL COMPANY

Conshohocken, Pa.

OTHER PRODUCTS: A. W. SUPER-DIAMOND Floor Plate • Plates • Sheets • Strip (Alloy and Special Grades)

50,000 PAGES
folded per minute!!

• Here's the newest in folders, with speeds required to fold up to 50,000 pages per minute. This folder, now in actual operation, is designed for fast and economical production. Another example of George F. Motter's Sons' contributions toward better equipment for the printing industry. Let us study your requirements.

GEORGE F. MOTTER'S SONS

Established 1838

YORK, PENNSYLVANIA

DESIGN • CUSTOM MANUFACTURE • REBUILD AND REPAIR
ROTOGRAVURE PRESSES, FOLDERS AND AUXILIARY EQUIPMENT

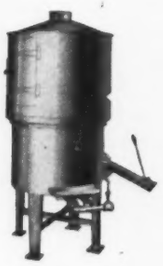
save on type melting costs 4 ways

1 *Saves time.* Surface type metal melting furnaces are noted for their rapid melting rates. This gives maximum production when needed.

2 *Saves metal quantity.* A Surface furnace gives precise control of the melting operation, cuts dross loss to the absolute minimum.

3 *Saves metal quality.* A Surface furnace gives quality control that is impossible when you feed slugs into a machine pot — requires a minimum of plus metal.

4 *Saves fuel.* Over forty years of Surface experience with furnaces and burners give you optimum fuel economy. Send today for literature Group H-16.



Surface
HEAT TREATING EQUIPMENT

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO
ALSO MAKERS OF **JANITROL** SPACE HEATING—**KATHABAR** HUMIDITY CONDITIONING

Equipment & Supplies

(Continued from Page 21)

of compounds are designed primarily for use in flexographic printing but are also recommended for other letterpress applications.

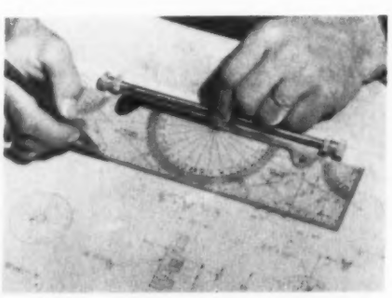
According to Robert V. Yohe, Vice Pres. of Sales, the compounds have resilient characteristics which permit high speed printing and are easy to mold due to the absence of free sulphur. Plate life is said to be increased since there is no sulphur to crystallize in the plate, pit the plate or leave hard spots in the corners of solid areas.

The compounds may be stored either at room temperatures or under refrigeration without danger of bloom. Plates made with the compounds are said to remain sharp and ready to use even after long periods of storage. The compounds are available in hardnesses ranging from 35 to 65 durometer. Please mention PEE No. 801 when inquiring for more information.

Screen Process Color Guide

The Uni-Match Color Guide is a system devised by Union Ink Co. for color matching in screen process printing. The guide consists of 300 color samples on separate cards, each card containing the formula for that color, mixed from two or more of ten basic colors of ink. The ten basic colors, plus black and white, are said to be the most widely used in screen process plants.

Crossing the ten basic colors, Union produced 30 secondary colors, all being shades of everyday use arrived at by volume and not by weight. In addition, the guide includes 160 tints, arrived at by mixing each of the basic and secondary colors with Uni-Match white in four different proportions.



Pocket Layout-Drawing Device — An instrument designed for layout and drawing use by printers, layout artists, offset strippers and production men, has been developed by Pickett & Eckel, Inc. The pocket-size device is to be known as the Professional Model Paraline and combines the functions of a T-square, triangles, straight edge, scales and protractor in one unit. It may be used on any flat surface. The instrument measures 12½ in. by 3½ in. and weighs 4 oz. A standard model is also available which measures 10½ in. by 3 3/16 in. For additional details, please mention PEE No. 808 in your request.

Sponsor states that from the guide's 300 colors, a matcher can find the nearest color to a required shade and then, from the exact formula, determine the proper slight variations to meet the requirements. The guide also visibly shows the undertones of each color. Please refer to PEE No. 793 if you wish more information on the Uni-Match Color Guide.

Side Register Control Bulletin

Photoelectric side register control systems, how they operate and what they do, are described in a two color, eight page bulletin announced as available from the General Electric Co. Designated as GEA-5947, the publication contains explanations of the two point and proportional register systems which are used on slitting, rewinding, side-trimming and printing operations. Operational drawings show the various uses and features of the two point (for moderate speed runs) and proportional (for high speed, high accuracy) register control systems. Component parts and various installations are photographically presented. A copy of this bulletin is available by asking for PEE No. 795 in your request.

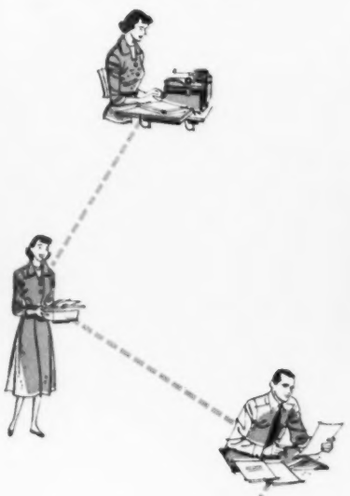
No-Mel Lubricant for Molds

It is claimed by T&R Products that No-Mel will keep fronts and backs of linecasting machines' molds clean and free from metal accumulations if used according to directions. It is a compound which is applied to both front and back mold wipers. Sponsor states No-Mel will not gum pot crucible mouthpieces or

(Continued on Page 26)

HOME
in good shape

from a 2-week business trip



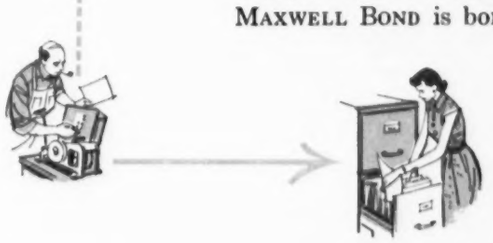
Another case for careful selection of paper for forms

In most places where forms are used, they get around (and plenty!) before they return to repose in their file folder homes. Whether they come home tired, limp and illegible or return fit for further service often depends on the kind of *paper* they're printed on.

Enter: MAXWELL BOND.

MAXWELL BOND is born to the adventurous life of a business form. It's tough. More than that, it offers such other advantages as these: It prints with great legibility; it can be used with all writing instruments with equal facility; it erases like a finer bond. All in all, we're proud to recommend it—proud enough to give it our watermark!

Do this. Try it—just once.



We'd be pleased to show you samples of MAXWELL BOND'S six colors, four weights and six finishes. Just send your letterhead.

Maxwell Bond

America's Favorite Low-Cost Bond

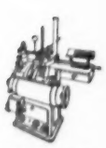
HOWARD PAPER MILLS, INC. • MAXWELL PAPER COMPANY DIVISION • FRANKLIN, OHIO

This advertisement set in Plantin 110, one of the English type faces available only from Monotype. For the best in typography, specify Monotype.

Monotype Keyboard

Monotype Composition Caster

Monotype-Thompson Type-Caster



Monotype Giant Caster

NOT HERE

Want action instead of aggravation with your problems of photo-mechanical or typographical equipment? Then consider these simple facts... printers and publishers agree that Monotype excels in precision equipment and manufactures the most efficient in the business. Also, we offer the kind of shirt-sleeve service and prompt delivery that keep temperatures down and profits up. Contact the Monotype company today. You'll find a highly trained staff of service personnel, designers and engineers eager to provide the practical assistance you need... when you need it.

monotype

LANSTON MONOTYPE MACHINE COMPANY
Twenty-fourth at Locust Street, Philadelphia 3, Pennsylvania

BRANCH OFFICES: *116 Spring St., N.W., Atlanta 3, Georgia · 170 Summer St., Boston 10, Massachusetts · 216 W. Jackson Blvd., Chicago 6, Illinois · 441 Lexington Ave., New York 17, New York · 55 New Montgomery St., San Francisco 5, California* · IN CANADA: *Monotype Company of Canada, Limited, 77 York St., Toronto 1, Ontario, Canada.*

Equipment & Supplies

(Continued from Page 22)

magazines, nor will it harm matrices, molds and/or magazine channels. It contains no abrasives. No-Mel, states T&R, will keep molds clean from one to three weeks. Supplied in 2, 4, 8 and 16 oz. packages. It can also be applied to plungers of linecasting machines as well as Ludlow plungers. When requesting printed bulletin please mention PEE No. 814.

Fluorescent Tube for Close Work

A fluorescent light tube designed for industrial use where close work is performed and visual comfort is desired, has been announced by Lustra Corporation. To be known as the Jade-Lite, it was developed to fulfill a need for a fluorescent lamp in the blue-green spectral range to offset eye strain and glare hazard. Sponsor claims the Jade-Lite tube is high in illumination value and free of glare. Each tube is dated and guaranteed for 24 months. Please refer to PEE No. 809 if you desire more information.

Photo-offset Printing-Processing Booklet

Photo-Offset printing and processing procedures for internal printing departments are described in detail in a new 16 page booklet available from Minnesota Mining and Manufacturing Co. Entitled *Executive's Manual*, the booklet explains the procedures practiced by internal printing departments in large corporations and small business houses. The booklet shows how to get the most out of internal printing departments. Copies of the booklet will be mailed on request, but please mention PEE No. 798 when writing.

Drives for Printing Equipment

An eight page bulletin on ACA (a.c. adjustable-speed) drives for commercial printing equipment application, is available from the General Electric Co. Designated GEA-5568-A, the publication includes descriptions of drives which are specifically designed without speed regulating resistors to give d.c. performance directly from a.c. power. Available in ratings of 3 to 50 h.p. and speed ranges of 3:1, 6:1 and 20:1, illustrations in the bulletin show ACA drives in various printing press applications. Copies may be obtained by asking for PEE No. 807 in your request.

Paper Handling and Sorting Aid

A hygroscopic substance known as Sortkwik has been developed by Lee Products Co. for handling and sorting operations involving paper in the printing plant. Sortkwik is applied to the thumb and forefinger by running the fingers across its surface in the flat container. It is claimed to be a stainless, greaseless, tacky film which enables a worker to pick up paper easily. It is available in flat unbreakable plastic containers. More information may be obtained by mentioning PEE No. 797 in your request.

Color Measurement Instrument

Gardner Laboratory, Inc., has prepared a six page bulletin in which is described the Gardner Color and Color-Difference Meter for measuring color differences in 10 to 20 sec. on paper and other materials. The instrument is designed for both laboratory and production departments. Readings cover visual lightness and show differences in values of red, green, yellow and blue using the National Bureau of Standards units of color for measurement. It is stated in the bulletin that the instrument permits appraisal of fresh color samples or old specimens for variations due to age, exposure or treatment. Other features of the instrument are also described, as well as its method of operation. Part of the bulletin is devoted to descriptions of precision measurement heads for various applications which may be plugged into the Color-Difference Measurement unit. If a copy of the bulletin is desired, please refer to PEE No. 681 when writing.

Static Eliminators

Installations of Chapman static eliminators on printing presses, folders, feeders, bronzers, varnishing machines and cutters are shown by Chapman Electric Neutralizer Co. in its recent six page bulletin. Among the contents of the bulletin is an explanation of the functional operation of the Chapman neutralizer. Included also are features of the Chapman Type RH static bar, as well as descriptions of Chapman transformers. If you desire this bulletin, please refer to PEE No. 667 when writing *Printing Equipment Engineer*.

(*Continued on Page 57*)

More Sales Dollars

PER SQUARE FOOT OF PRESS

Presses of other makes which take the same size sheets as the Miller group occupy from 104% to 180% more floor space than Miller presses.

More Sales Dollars

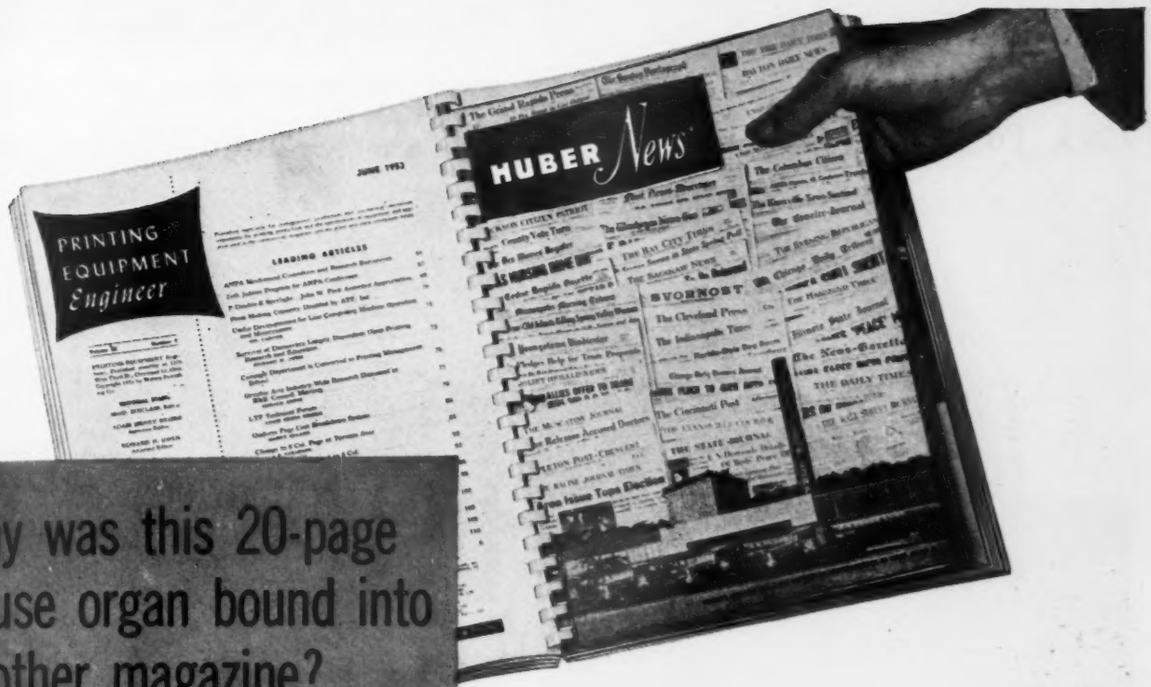
PER HOUR OF RUNNING TIME

Miller presses will give you up to 50% more saleable sheets per running hour than will other presses taking the same size sheets.

MILLER PRINTING MACHINERY CO.

1103 Reedsdale Street **Pittsburgh 33, Pa.**

Layout & Copy by
Mr. George D. Daughraty
The Benham Press
Indianapolis, Ind.



Why was this 20-page house organ bound into another magazine?

Because newspaper production men always want to learn the latest techniques in mechanical production, copies of the current HUBER NEWS were bound into the special edition of *Printing Equipment Engineer* circulated at the ANPA Mechanical Conference in Milwaukee.

This issue of HUBER NEWS salutes many of the nation's leading newspapers, gives details on their mechanical production. And since many newspaper production problems occur in all the graphic arts, Huber is making this special HUBER NEWS available to you, too.

You'll read how Huber's midwest tank truck fleet supplies ink to keep presses rolling at 37 leading newspapers. You'll follow a picture report on putting a newspaper to bed, and learn how a Huber-engineered tank installation increases efficiency in a plant. You'll see our Clay Division "dry washing" clays that go into printing papers...and our Chemicals Division making Zeolex 20 in Havre de Grace, Md.

Yes, HUBER NEWS is full of interesting articles, pictures and features. Write for your copy today.

HUBER

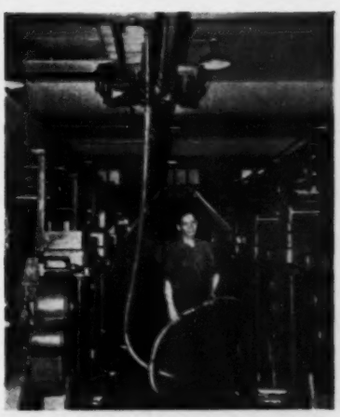
J. M. HUBER CORPORATION—INK DIVISION
1478 Chestnut Avenue, Hillside, New Jersey

INK PLANTS: Hillside and Bayonne, N. J. • Borger, Texas • Boston, Mass. East St. Louis and McCook, Ill. • INK SALES OFFICES: Hillside, N. J. Boston • Chicago • St. Louis, Mo.

HUBER PRODUCTS IN USE *SINCE 1780*

400,000 POUNDS OF HUBER NEWS INKS travel roads to U. S. newspapers in a single day. Current HUBER NEWS shows how one daily is "put to bed."

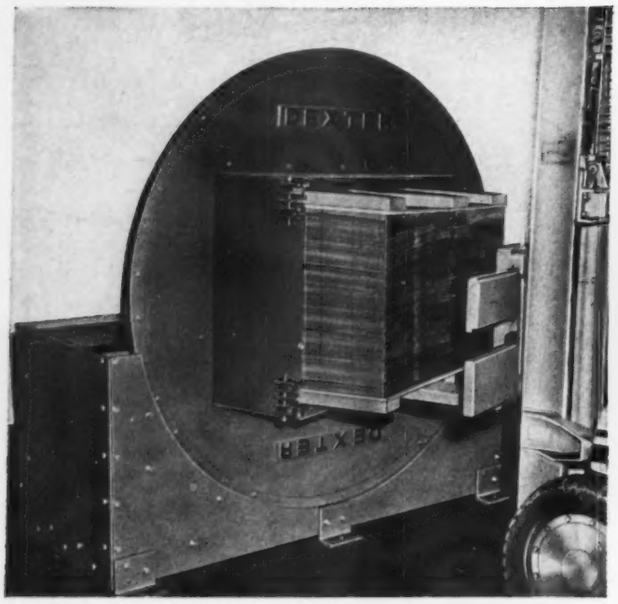
←PERFUMING A NEWSPAPER: Read how it was done by the *Battle Creek Enquirer and News*—and why—in your latest HUBER NEWS. Write for a free copy.



HUBER-ENGINEERED TANK→ INSTALLATION increases production efficiency for *Racine Journal-Times*. Read the complete story in HUBER NEWS.

↑FIRST PAPER TO SUPPORT LINCOLN: The 106-year-old *Chicago Tribune* (news room shown here) is one of 37 newspapers in 33 cities served by Huber Ink's midwest tank truck fleet.

The Dexter Metal Sheet Pack Turnover



The Dexter Metal Sheet Pack Turnover

Basically, this motor driven device comprises a "wheel and box" mounted on an axle and set in supporting frame.

Sheets delivered face down from the drying oven in stacks or piles, are trucked on skid into the turnover. A second skid is placed on top of the pile and a half revolution of the turnover brings the pile of sheets to face up position, resting on the second skid.

The pile is then trucked out to the next operation.

There is no clamping of piles.

The machine is built in two sizes, one handling sheets up to 36 x 36", the other, up to 36 x 44". Minimum size sheet handled by either machine is 16 x 16". Maximum permissible load is 6,000 lbs. and sheets of any thickness can be handled.

The pile is jogged in both directions into the box during the process of turning which takes approximately 20 seconds.

Additional information will be furnished on request.

This straight line trimmer does away with needless rehandling and assures unqualified accuracy

The Brackett Safety Trimmer

Accurate, uniform trimming and cutting apart of booklets, catalogs and other bound work is recognized as being just as important as accurate register on press or accurate folding on folders, if the quality of the job is to be maintained.

Accuracy is even more important in trimming and cutting of circulars, labels, forms and other flat work where margins are close and exact size is required.

Trimming of labels, booklets, catalogs, inserts and other flat work is handled by the Brackett at double or triple the speed of the conventional cutter.

On the Brackett, work moves in a straight line, away from the operator, without waste motion or needless rehandling.

The use of mechanically set spacer shafts insures fine accuracy without even the tiniest variation. This accuracy is maintained from start to finish, no matter how large the run.

For jobs that repeat, settings may be retained, with important savings in time otherwise required for resetting.

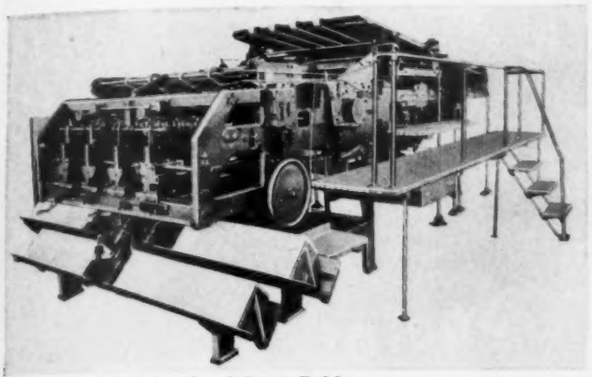
The Brackett handles work up to 25½" in width and 50" in length.

Standard equipment includes two spacer shafts. Extra shafts for permanent set-ups can be supplied.

Write for literature.

Dexter Folder Company
General Sales Offices
330 West 42nd Street, New York 36, N. Y.
Boston, Philadelphia, Washington, Cleveland, Chicago, St. Louis
Agents in principal foreign countries

Folds as many signatures hourly as two model "N" Quads . . . . with 33% saving in floor space



The Dexter Duplex Quad Book Folder

Basically a Model "N" Quad folder, this machine has an additional cross feeder and delivers *two* sheets on separate conveyors simultaneously to position at first fold, one above the other and individually registered both side and front.

Signature sizes: 4⅛ x 6¼" to 7¼ x 10½".
Flat size sheets: 25 x 33" to 42 x 58".

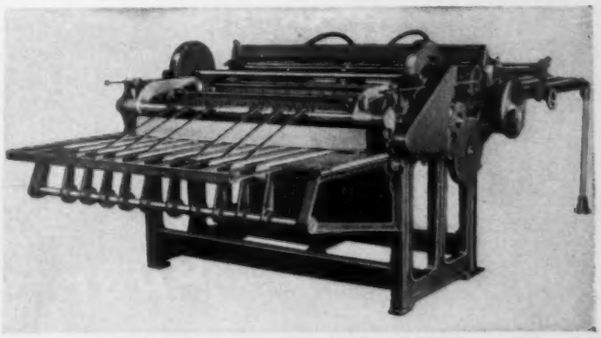
The sheets are folded and delivered into packer boxes as on the "N" Quad, but the *Duplex* Quad delivers four 32 page signatures with *closed* heads, whereas the Model "N" produces two 32's composed of inserted 16's.

The Duplex Quad may be furnished as a complete new unit—or a Duplex attachment can be supplied for any Model "N" Quad already installed.

The Duplex Quad folds approximately as many signatures per hour as two Model "N" Quads, with a saving of about one third of the floor space required by two Model "N" Quads. Also the 32 page signatures with closed heads delivered by the Duplex Quad facilitate subsequent bundling, gathering, sewing and stitching operations.

Further information and data showing the economical application of this folder to your production will be furnished on request.

Folds, slits and stacks four-page jobs at up to 12,000 sheets per hour



The Dexter-McCain High Speed Single Fold Folder

With the Dexter-McCain High Speed Single Fold Folder, covers, inserts and other four page jobs, singly or in gangs, are folded, slit apart and stacked on flat delivery at speeds of 10,000 to 12,000 sheets per hour, depending on quality and condition of stock.

Maximum size sheet handled is 24 x 50"; minimum size 12 x 18".

This machine is also equipped to handle center bleed trimming. It has continuous air wheel feeder, is rigidly constructed and has ball bearings and roller gears, hardened and ground.

A valuable feature of this folder is that it folds with ease covers and other heavy stocks which are difficult to handle on other types of folders.

This machine is now being used mainly to fold long runs of covers for magazines of large circulation.

Our representative will give you further information about this high speed, single fold folder.

Dexter Folder Company
General Sales Offices
330 West 42nd Street, New York 36, N. Y.
Boston, Philadelphia, Washington, Cleveland, Chicago, St. Louis
Agents in principal foreign countries

LOOK at Matrix Contrast

The last word in linecasting efficiency ...with Matrix Contrast Service you get Black & White and/or COLORS applied to old as well as new matrices; expertly done in your plant or at our nearest Service Branch by our trained technicians; applied when you want them as you want them without interrupting your regular production schedules. And when you buy new matrices, deliveries are made daily from the matrix manufacturers to our New York, Chicago and Los Angeles plants which are equipped to operate 24 hours a day.

Yes, you had better take a new look at Matrix Contrast Service! Now, with new brilliant Matrix Contrast Colors, operators can see at a glance if there's a "wrong font" in the line. Black and White plus Color processing will reduce operator errors to the absolute minimum. Write today for complete information on this *time-proven* Matrix Contrast Service continuous maintenance plan.

Copyright 1953, Matrix Contrast Corporation

MATRIX CONTRAST SERVICE

MATRIX CONTRAST CORPORATION
154 West 14th Street, New York 11, N. Y.
326 W. Madison Street, Chicago 6, Ill.
1105 Trenton Street, Los Angeles 15, Calif.

European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E.C.1.

PRINTING
EQUIPMENT
Engineer
November 1953

FUTURE LOOKS BRIGHT FOR RESEARCH AND FOR GENERALLY ACCEPTED ENGINEERING METHODS IN GRAPHIC ARTS INDUSTRY

R&E Council *considers refinement of makeready procedures and establishment of standards*

PREMAKEREADY and makeready problems confronting the industry were reviewed at the recent two day meeting of the Research and Engineering Council of the Graphic Arts Industry, Inc. Then there was a frontal attack on the situation by pooling ideas and experience by many printing plant executives in attendance. Striving toward industry acceptance of standardization of methods, materials, and procedures, the 250 in attendance renewed the industry's fight on the reduction of press down time. Called the No. 2 Premakeready and Makeready Conference, the meeting was held at Hotel Sheraton-Gibson, Cincinnati, O.

The Conference was opened by General Chairman Lee Augustine, who is also Vice Pres., The Printing Machinery Co. In his opening remarks, R&EC President Edward J. Triebe told those attending that the Council does not intend to duplicate technical conferences. He said it was the aim of this group to coordinate its work with other Graphic Arts associations. Triebe is Vice Pres. and General Mgr., Kingsport (Tenn.) Press.

Opportunities Available

A summary report on the letterpress discussions held at Makeready Conference No. 1, in Chicago last December, was delivered by Dwight L. Monaco, Asst. Vice Pres. and Director of Mfg., McGraw-Hill Publishing Co., New York, N. Y. Monaco said the most significant observation to be made from last year's findings is the obvious fact there exists today many opportunities for printing plants to immediately improve makeready procedures. These opportunities, he added, are available without basic research studies and without extensive engineering investigations.

The speaker named reduction of costs to the buyer as the objective in reducing makeready costs. He also said: "Makeready should not be looked upon as a point at which many things meet and where shortcomings of all previous actions are overcome by adjustments at the press." According to Monaco, the thinking expressed at the conference was that everyone who participates in the production of printing should work together as a team. He stated that one supply company representative indicated his company would be willing to provide precision material if the printers could get together and agree on what they wanted.

An Admission of Weakness

Mr. Monaco remarked that the Chicago conference also revealed how many operations follow the trial and error method as the only way to deal with unsatisfactory conditions on the press. He called this an industry admission of weakness.

Next, George S. Hammer reviewed the discussions at the offset lithography sessions of this first conference. Hammer is Quality Control Supervisor of Forbes Lithograph Mfg. Co., Boston. Out of the first conference, said Mr. Hammer, came methods of proving, need for dot value standards, makeready procedures, prepositioning of plates, table analysis of press time, inspection methods, check lists, etc. He added that research can help to solve the many problems in offset printing by providing a better understanding of what actually happens in the process.

Correlation Meeting

A correlation session of the Makeready Meeting No. 2, Research & Engineering Council, was held Friday morning, Oct. 2 at Cincinnati's Hotel Sheraton-Gibson. Chairman Augustine and his Committee are to be complimented upon making it possible for all executives to hear a digested report of what took place at the several previous concurrent meetings. In fact, on Thursday night, Oct. 1, three meetings were in progress at the same time. Council members appreciated receiving reports on the meetings in which they could not participate.

General Conference Chairman Lee Augustine presided. Before receiving the oral reports of the separate meetings, a paper entitled *Check and Save* was read by J. Homer Winkler. The author of the paper, Frank Hirt, Production Mgr., Keller-Crescent Co., Evansville, Ind., could not attend.

In Hirt's paper were summed up the objectives which executive members of the R&E Council would like to see achieved for the industry in general. These are: (1) Test materials coming into your plant; (2) Check materials manufactured or fabricated for your own use in the plant, and (3) Standards should be established in the Graphic Arts industry. The full context of Mr. Hirt's splendid paper will be published in the Conference Proceedings.

After presentation of Hirt's paper, Chairman Augustine called upon various people on the platform each to present a summary of a meeting he attended. Some of the speakers, in fact, functioned as chairmen of the sessions which they summarized at the correlation meeting.

Printing is a Science

Dr. Marvin C. Rogers, Research Director, R. R. Donnelley & Sons Co., Chicago, reported the Second International Conference of Printing Institutes, June 1953, held in Stockholm, Sweden. During the course of his remarks, Dr. Rogers said: "Printing is a science—not an art." He reported that Europeans are trying to make it a science.

Speakers at the opening session of the Research and Engineering Council's Makeready Meeting in Cincinnati are shown above, from left to right, as follows: General Conference Chairman, Lee Augustine, Vice Pres., Printing Machinery Co., Cincinnati, O.; R&EC President, Edward J. Triebe, Vice Pres. and General Mgr., Kingsport Press, Kingsport, Tenn.; George S. Hammer, Quality Control Supervisor, Forbes Lithograph Mfg. Co., Boston; Frank F. Pfeiffer, Vice Pres. and General Mgr., Reynolds & Reynolds Co., Dayton, O.; and Dwight L. Monaco, Asst. Vice Pres. and Director of Manufacturing, McGraw-Hill Publishing Co., New York, N. Y.

Offset Printers Want Education And Standards

THE production manager of an offset printing plant and his department are the most important cogs in the makeready procedure, declared Andrew Donaldson, jr., keynote speaker at the Offset-Lith Session of the R&EC Premakeready and Makeready Conference in Cincinnati. Donaldson, who is Plant Mgr. of the Strobridge Lithographing Co., Cincinnati, attacked the problem of keeping presses producing with a minimum amount of lost time between jobs. He reminded his audience that it is up to the production men to select jobs for the presses which involve the least change in sheet size, guides, grippers, color and other adjustments which normally must be attended to when a new job is put on the press.

The offset meeting was presided over by Charles F. King, Asst. General Supt., U. S. Printing & Lithographing Co., Cincinnati, O. A panel of five industry representatives in different areas participated in discussions from the floor. They were: Curtis S. Cook, Manager, Calendar Div., Kemper-Thomas Co., Cincinnati; John J. Dougherty, Branch Mgr., Roberts & Porter, Inc., Cincinnati; G. L. Erikson, Exec. Vice Pres., Braden-Sutphin Ink Co., Cleveland; John L. Kronenberg, Div. Mgr., S. D. Warren Co., Boston; and Thomas Stevenson, President, Stevenson Photo Color Separation Co., Cincinnati.

Needs in Offset Printing

King said there is need for controlling the relative humidity in pressrooms at 45% and in platemaking departments at 55%. It was shown, he said, there is little control in offset proofing unless power proofing equipment is used. The need for multi-color offset proof presses is another difficulty in the premakeready picture. The industry has admitted, he went on, there is now little control over the type of work designed by artists and

Misunderstandings Create Problem

Out of the first meeting there emerged an agenda for progress, said the next speaker, Frank F. Pfeiffer, Vice Pres. and General Mgr., Reynolds & Reynolds Co., Dayton, O., which he broke down into three categories. Speaking on the subject *Can We Cope With These Problems?*, Pfeiffer named industry relations as one of the problems facing the industry. Misunderstandings created by lack of knowledge on the part of those who supply materials and equipment with which to work were said to be obstacles that can be eliminated.

Another problem, continued the speaker, is that of internal plant procedures. He said: "Habits and practices that have grown up over years of management and indifference to better methods and procedures when coupled with craft reluctance to change, become real hurdles. The human fault of being too willing to take the easy way out, of being unwilling to put the brain power and energy in developing and creating a better way, are an important part of this problem."

Adoption of Standards

Lack of tools and procedures for proper inspection and control prior to the makeready phase was named as another handicap for the industry. He continued saying that some of our problems have to do with the absence of a common language or standard terminology. Other difficulties stem from a lack of a standard system of dimension. Some of the problems are associated merely with a lack of understanding of what is required on the part of the other fellow for him to do his job.

During his talk, Pfeiffer called attention to the establishment of standards. He said: "In some instances their adoption requires nothing more than a change in working habits. In others, it requires change in equipment, material or trade customs."

Do Much of Work Away from Press

The speaker told Council members that last December's meeting illustrated there is a real opportunity to reduce standing time of equipment merely by changing internal plant procedures. He urged members to encourage workers to concentrate on a better end product of their particular task. By pre-planning the job and making every effort at premakeready, he said, "we can do much of the work that is now done on the press and do it away from the press."

Pfeiffer called rubber plate printing a good example of snapping a plate on the press and starting to run immediately. He remarked that it will be a major step to transfer work now being performed on the press to a newly established premakeready unit. He also said that if good standards are developed there should be equipment and tools which will tell in advance what is being sent to the press is in conformity with those standards.

In his conclusion, the speaker said the progress made in reducing press down time depends to a great extent on the ability to establish good relations with workers before introducing improvements.

A panel composed of representatives in different areas of offset printing participated in the Offset Lithography Session of the R&E Council's No. 2 Premakeready and Makeready Conference. The participants are shown, from left to right, as follows: John J. Dougherty, Branch Mgr., Roberts & Porter, Inc., Cincinnati, O.; Curtis S. Cook, Manager, Calendar Div., Kemper-Thomas Co., Cincinnati; G. L. Erikson, Exec. Vice Pres., Braden Sutphin Ink Co., Cleveland; Chairman of the meeting, Charles F. King, Asst. General Supt., U. S. Printing & Lithograph Co., Cincinnati; John L. Kronenberg, Division Mgr., S. D. Warren Co., Boston; Thomas Stevenson, President, Stevenson Photo Color Separation Co., Cincinnati; and Andrew Donaldson, jr., Plant Mgr., Strobridge Lithographing Co., Cincinnati.

salesmen for offset reproduction. Better job scheduling will enhance the efforts of pressmen to reduce their makeready time. Lastly, King said standard platemaking methods are now available and should be followed by every plant wherever possible.

What Production Dept. Can Do

In his talk, Donaldson stated the production department should plan the layout of a color job so that the areas of most critical register are near the gripper. It can also help by arranging the sheet so all solid colors fall one behind another and can be run without sacrificing more delicate tones in other areas. On the problem of marks on the sheet from delivery wheels, he suggested planning the sheet to allow for gutters for the wheels but to permit the use of enough wheels to support the sheet. Many presses, however, are furnished with a center bearing on the wheel shaft which prevents placing a wheel in the center of the sheet.

The speaker also remarked that good press proofs are required as part of standardization. Hand proofs, he added, are not good enough. There must also be a sensitivity guide on the proof and it should be used to compensate for press gain in two and four color printing. Proper tint values, register and lay marks must also be put on a plate by the platemaker before it is sent to the pressroom. He explained lay marks as being marks at equal distance from the four corners of the sheet plus marks for positioning the plate on the cylinder. In the Strobridge plant center marks are placed on the gripper and back edges of the plate especially for work-and-turn and back-up sheets.

Checking Plates and Formulas

He said: "We feel that checking the finished plate is one of the most important steps in platemaking. We roll up and inspect every press plate. If it is a complicated job, we pull an impression of the black plate on transparent plastic in a hand transfer press and fit this to all other plates. If there is complicated masking on a photocomposed plate, we rule lines on the plastic to check these masks."

Donaldson advocated constant checking of all platemaking formulas to see that they are standard.

According to the speaker, reducing makeready time means the press must be kept in good operating condition and the adoption of proper washup procedures. On this point, he said regular inspection of controls and motors, frequent checking of feeder hoses and suckers, proper cleaning of bearers, gears and fountains, and checking roller settings at every opportunity all help to reduce press down time.

Readiness for Next Job

Readiness of paper, dampers, cylinder blankets, press packing, waste sheets, etc., for the next job going on the press all tend to shorten the makeready time, stated Donaldson. Calipering of the new plates and ink mixing can be done while the press is being washed up. He said pressmen in the Strobridge plant keep an ink book which contains a sample and formula of every ink mixed.

Donaldson also called for use of some form of pre-positioning of plates on the press. Some shops, he noted, use marks scribed on the cylinder which are aligned with marks on the plate. Pre-setting the end clamps, or clamp bar method, is used at the Strobridge plant.

Inspection of paper before delivery to the pressroom was described as another aid to the pressman.

Artist's Education Needed

During the discussions which followed, Curtis S. Cook said there is a great need for closer cooperation between the artist and offset printer so that the former will become aware of the problems involved in color printing. He added that the artist must know what operations are necessary in order to reproduce a job he has designed.

John L. Kronenberg counseled that the platemaker, in all cases, should take into consideration the kind of paper to be used on the job before going ahead and making the plates. He noted that too many offset pressmen are not aware of variables in paper which effect both quality and running time on the press. Color of the stock, including white paper, should be considered by the photographer, he said.

Ink Always Comes Last

G. L. Erikson commented that too frequently ink is the last item considered in makeready and that in many instances time would be saved by placing this important supply at the front of the list. He called for printers to give the ink-maker ample time when a supply of special ink is needed. He suggested using standard ink colors from the can wherever possible rather than devote time to mixing on a slab. Also, when a special ink is ordered, the printer should supply the inkmaker with a sample of the paper to be used, inform him of the press the job is to run on, the kind of blanket used, etc. He said the industry needs standard methods and materials for proofing, as well as ways of measuring the quality of proofs during the operation.

(*Continued on Next Page*)

Bierbauer Press Makeready Method

The cylinder press makeready method discussed by Plant Supt. Earl Bierbauer, Baring Press, Detroit, at the recent R&E Council Makeready Meeting No. 2, Hotel Sheraton-Gibson, Cincinnati, caused considerable comment. For this reason, we are reprinting the description of the method below.

In Bierbauer's plant, Miller presses are used. A considerable portion of Baring Press printing is done from 11 pt. plates on patent base. The balance is done from regular type forms, from original engraving and/or electrotypes. Thus the makeready method is applicable to both types of forms.

In the Baring Press plant extra hard packing is used on the presses from top to bottom, as follows:

An oiled manila draw sheet 0.006 in. thick; an unoiled manila drawsheet, 0.006 in. thick; a sheet of s&sc 0.003 in. thick (it is on this sheet that a limited amount of spotting up is done with 0.001 tissue), and a sheet of Westvaco Inspiration 60 lb. 0.003 in. thick, 35 in. by 45 in.

An impression is taken on a sheet of s&sc to determine if any of the plates should be underlaid.

After the underlays (if any) have brought the plates up to type high and while the form is being lined up, the press is inked up with a medium cover red. No drier at all is to be used in the ink. Enough ink to fill up the plates is used. An impression is taken on s&sc stock *on top* of one sheet of the stock on which the job is to be printed. After the impression has been taken on the s&sc sheet, the form rollers must not be permitted to pass over the form again. Lift out the form rollers and take a second impression on another s&sc sheet, just like the first sheet with the plates which have been surcharged with ink. In the second impression, however, the impression is taken with the ink which remains on the form after the first impression. The sheet of s&sc on which the second impression has been taken is the sheet used for the overlay.

Now, place the sheet on a table and sprinkle dry buckwheat flour along one edge of the sheet so the flour can be rolled back and forth over the wet printing. (Famo Whole Buckwheat Flour made by Harris Milling Co., Pt. Pleasant, Mich., is used at Baring.) Do not use prepared flours because they contain salt or other seasoning.

Then shake off all loose flour and carefully scrape off loose powder from type and other areas where an overlay is not required.

The next operation is to suspend the sheet vertically on a board and cover the surface with lacquer from a spray gun. The lacquer solution will bind the buckwheat flour to the ink and will dry in approx. 5 min.

If it is desired, the clear lacquer may be changed to a blue pastel color to enable the pressman to more readily see where the lacquer has been sprayed. This idea is helpful when making ready all-over screen plates. The lacquer may be tinted by putting a drop or so of dark blue ink in 1 gal. of clear lacquer.

The lacquer and lacquer thinner may be purchased at any paint store. Thin the lacquer with the thinner in proportion of one-half lacquer and one-half thinner to reduce the proper consistency for use in the spray gun.

Spray Gun—The spray gun is DeVilbiss, Type GCS No. 501 with which to apply the lacquer.

After the lacquer coating has dried for about 5 min., go over the overlay with fine sandpaper enough to smooth it out. The overlay is now ready to hang on the press in convenient sections.

Panel for R&E Council's Letterpress Session, held Oct. 1, at Sheraton-Gibson Hotel, Cincinnati—Left to right: J. L. Leatherdale, Vice Pres., Maracle Press, Ltd., Oshawa, Ontario, Can.; Fred A. Weymouth, Div. Vice Pres., Printing Ink Div., Interchemical Corp., New York, N. Y.; Walter Deye, Ex. Vice Pres., Quality Engraving & Electrotyping Co., Cincinnati, O.; William R. Maull, Director Sales Service, The Mead Corp., Chillicothe, O.; John Robinson, Director Public Relations, Fashion Frocks, Inc., Cincinnati, O.; Walter Scott, Owner, Advertiser's Engraving Co., Cincinnati, O.; Robert H. Roy, Dean, School of Engineering, Johns Hopkins University, Baltimore, Md.; J. L. Baarlaer, Pres., The Cincinnati (O.) Typesetting Co.; Harry G. Wolfe, Ex. Vice Pres., Davis, Delaney, Inc., New York, N. Y.

Ink Setting and Drying

Kenneth Helm, Milprint, Inc., Milwaukee, asked for a way to check ink receptivity time on paper. Kronenberg replied by defining ink receptivity time as the ink setting period between the instant of impression and when the ink loses its gloss finish. He suggested starting on a proof press with papers of known characteristics. Using ink which is used on the press, he advocated taking a number of impressions and comparing the ink setting time.

In reply to another question on ink drying, Erikson said that the sulfur dichloride process for ink drying is corrosive to equipment and causes a noxious odor. He thought inkmakers will come up with faster drying inks by more normal means rather than setting the ink by use of chemical agents.

Specify Paper Before Making Plates

The group reverted to a point brought out by Kronenberg concerning the need for knowing the kind of stock to be used before making the plates. Panel member Stevenson said trade platemakers must often do the best they can without this knowledge. It was brought out that in one plant the cameraman will not go ahead until he is told what kind of paper is to be used on the job. Another plant requires not only this information but also the type of plate to be used and whether the job will run on a sheet or web fed press. King noted that very few plants now give these things consideration before the plate is made.

During the discussion of paper and ink problems, one printing plant executive remarked that the printer was always in the middle even though "he stands 95% of the responsibility." Kronenberg shot back that the papermakers are doing all they can to control paper variation but cannot be responsible for variables which exist. Erikson reminded the audience that the printer often doesn't seek help from the supplier until the job is running. Presenting the facts on a job at an early opportunity will improve the assistance suppliers are able to render.

Air Condition All Departments

Air conditioning formed another area for investigation by the panel members. Donaldson counseled that air conditioning of pressroom and platemaking departments does not mean you have finished the job. There is still a great need for this control in the bindery and paper cutting department, he said. Kronenberg stated that paper containing a relative humidity of 40% to 45% is what can be expected from most paper mills.

Donaldson called for remarks from the floor on the experience of those present in dry offset printing. One person offered the information that he finds it difficult to get consistent results using the process. There is much to be ironed out, he added. On having offset platemakers produce dry offset plates, someone said it isn't easy to make photoengravers out of these craftsmen.

Bottles of "Gunk"

Erikson wanted to know why the industry doesn't standardize on etching solutions recommended by the Lithographic Technical Foundation. He said that for the printing ink industry to standardize on inks, the offset printers must first standardize from shop to shop. He added that too many foremen have their own formula book and bottle of "gunk" to doctor the ink.

Mr. Stevenson summarized the position of trade platemaking plants with the statement ". . . we cannot standardize to any great extent because of the requirements of too many customers." Cook thought the industry needed an educational program for sales departments to point out good and bad points of copy accepted for jobs. One area in which standards can't be achieved, thought Dougherty, is that of skilled workers. Each employee has his own way of doing a certain operation. He said the chemical companies have standardized on its supplies.

This is Fred Hofferth, Production Mgr., American Book Co. who was Chairman of R&EC's Letterpress session, Cincinnati, Oct. 1.

Standards Only in Some Areas

Donaldson reiterated that certain areas in the offset process can be standardized in the industry while other areas have to be attacked by individual plants. Graining of plates, he went on, can be done universally but it is difficult to see how, with the variety of jobs in offset printing, the industry can standardize on positives.

Panel moderator King concluded with an appeal for more fundamental research in the offset process. There is a need to know what happens on the press, he said. Eventual solution of the problems faced by the industry can come only from fundamental knowledge, not from work done in plants.

Letterpress Standards Are Needed

TWO speakers at the Letterpress Session of the Research and Engineering Council held at Cincinnati's Hotel Sheraton-Gibson on Thursday afternoon October 1, explained the engineering standards adopted in their plants and expressed the need for universal standards to be followed by the letterpress printing industry in general. Fred Hofferth, Production Manager, of the American Book Company, Cincinnati was chairman of the meeting. The first speaker was Harry G. Wolfe, Executive Vice-President, Davis, Delaney, Inc., New York who spoke upon *How Suppliers Can Help Printers Reduce Makeready.* In particular Mr. Wolfe stated that the men on the panel as well as members of the Research and Engineering Council could help establish standards for pressroom operations. He paid a fine compliment to L. W. Claybourn who he said has done more for precision in the printing industry than any other man alive.

Some of Wolfe's more pithy comments were as follows: To help the printer, the supplier must furnish a constantly improved product. If the printer were furnished materials at plus or minus 0.001 in. there would be little need for pressroom makeready. He asserted it doesn't make sense for a press manufacturer to produce a machine within 0.0005 in. if a pressman is going to patch and markout on the makeready sheet from 0.001 in. to 0.003 in. For this reason alone standards should be established.

Wolfe asserted that all the suppliers should manufacture their products within guaranteed limits.

He stressed that the heretofore considered necessary makeready operation with respect to plates doesn't expose itself to the pressmen until after the plates have been put upon the press and are ready to print from. In other words, the pressmen must work with what he receives and if no regard is taken with respect to tolerances, the pressmen must spend time compensating for the dimensional error.

The film thickness of ink may vary between 0.002 in. and 0.003 in. To deposit more ink upon the sheet is uneconomical. The roller coverage built into the press should control the flow of ink at all times. The roller wash-up time on presses should be shortened as much as possible. Cleanly conditions are paramount.

Quality control in printing begins as soon as the artist or layout man puts pen or brush to the paper. If the artist is not familiar with register requirements in color work he can cause a great amount of trouble. Mr. Wolfe stated that if the artist knew about these requirements he would not use techniques which cause trouble in the pressroom.

The speaker stated that the larger printing plants can and do work to their own established standards. It is more difficult for the smaller plant to do so. He outlined the control procedures followed in his plant with respect to type production.

With respect to the typographic composition and makeup which might be purchased outside the plant he stated that such composition should contain only precision materials, and a loosely madeup page is of no value to the printer.

Wolfe enumerated standards and controls for other operations and equipment in the plant. These were related to chases, electrotypes, curved plate proof press, and plate mounting materials. He said that the Vandercook Lite-Base plate mounting system had been recently installed in the Davis, Delaney plant, on a trial basis.

Wolfe stated there was confusion in the industry regarding relieved curved plates with respect to which level in the plate coincides with the pitch line in the press.

The speaker closed his address by stating again that the larger part of makeready is done before the form or plate reaches the pressroom. He also repeated that constant progress with respect to improvement in materials and supplies must come from the suppliers themselves.

From Copy to Press in Actual Plant Practice

The very fine paper prepared jointly by Howard P. Wampler, Head of Engineering Department, Waverly Press, Baltimore, Md. and Robert H. Roy, Dean of the School of Engineering, Johns Hopkins University Baltimore, Md. was read by Professor Roy. The paper was entitled *From Copy to Press*. In the introduction to the paper Professor Roy stated "This paper will recount the experience of one plant in seeking to reduce makeready on flat bed letterpresses. It will depict the results received and, both in passing and conclusion, to point up gaps in research knowledge and future research possibilities for consideration by this Council."

After discussing the controls in Monotype composition the speaker stated "Fundamental to all effort in controlling type height was the theory that proper impressions should be the consequence of constant unit stress in the press, that is, that each unit area under the cylinder should be subjected to the same pressure. In common with other pre-makeready processes, with mechanical overlays, and with traditional lockup methods, this means that solids should be higher than 0.918 in. and that fine lines and highlights should be lower . . . Hairline rules used in this plant in thousands of tables were cast to 0.916 in. by dressing down the matrix surfaces. Leader matrices likewise were modified to cast in regular composition at 0.916 in. Later observation on the continued spotup of display type in the press led to the decision to cast sizes from 14 pt. up to a height of 0.920 in. In passing it may be added that these were not perfect solutions. A table ruled without nut quad or comparable space between 0.916 in. rules and adjacent 0.918 in. characters cannot be made to print satisfactorily because the rules will not show and the higher type will bearoff the lower rule.

"Display type cast to 0.920 in. can likewise present a comparable problem. The unit stress area is related not only to height but to the kinds of areas under the cylinder. Thus, 0.920 in. display type may have just the right impression when close to other printing elements but tend to punch through when surrounded by much white space. At the time of composition this relationship is not known and besides sorts of differential height would be quite cumbersome, so this deficiency in impression still is met on the press on those relatively few occasions where the need arises."

Other control and engineering practices followed at the highly engineered plant of the Waverly Press in Baltimore were discussed by Professor Roy. Included were engravings, air conditioning, electrotype and plastic plates, press leveling (makeready), press position, positioning complex forms, together with the results obtained.

While discussing press makeready operations in the Waverly Press plant, Professor Roy mentioned that in several instances the pressroom foreman and two pressmen of acknowledged skill were given identical press sheets for spotup purposes. On each of the three sheets there were many spots yet no two were in the same place. What looked low to the foreman looked right to the other two men. What looked low to the first pressman looked right to the foreman and the second foreman. In short, there was total disagreement. The speaker observed: "It is more likely that the passage of time and the growth of employee and foreman acceptance of certain makeready procedures were the dominant factors." He then said, "It can be reported now that this part of the makeready project has been resolved. Spotup, to be sure, has not disappeared from the press room but its application is dictated by the actual requirements of the forms rather than by habit or tradition."

(*Continued on Next Page*)

"Variable" Standards

At the Letterpress Session of the Research and Engineering Council held at Hotel Sheraton-Gibson, Cincinnati, on Thursday Oct. 1, frequent reference to the need by the industry for established standards was made. Harry G. Wolfe, Executive Vice President of Davis, Delaney, Inc., New York, N. Y., reported the list of standards which are used in his plant and on which specifications for materials coming into his plant are based.

In looking over the list perhaps you will find that the standards mentioned are not exactly the same as yours. Perhaps, also, the express tolerance of 0.002 in. may not coincide with your customary practice regarding photoengraving plates. Anyhow, everybody is agreed that type high is 0.918 in. Some time in the near future the Council no doubt will start work on the establishment of standards which will be recognized throughout the industry.

The standards as reported by Mr. Wolfe are as follows:

	Inch
Height of sectional blocks and bases for regular 11 pt. plates	0.759
Regular 11 pt. plates printers' measure	0.1521
Regular 11 pt. plates, electrotypers' measure	0.154
Regular 16 ga. zinc or copper plates (tolerance of 0.002 permitted)	0.065
Height of bases for regular 16 ga. zinc and copper plates	0.853
Backing for zinc or copper to make 11 pts. for patent blocks	0.090
Monotype base for halftones and zinc	0.853
Monotype base for patent base electro for newspapers	0.768 and 0.763
Monotype base for patent base electros for printers	0.759
Height for regular leads and slugs	0.759
Height of high leads and slugs	0.875 or 0.853
Height of regular iron furniture	0.680
Height of regular metal furniture	0.664
Type high	0.918

Speakers' Panel at R&E Council's Makeready Meeting No. 2, Cincinnati—Front row (left to right): George Wise, Supt.-Partner, Dugan-Millis, Inc., Cleveland; Fred Pfister, Gen. Supt., A. H. Pugh Printing Co., Cincinnati; Sam H. Fitzpatrick, Supt., Press of H. N. Cornay, New Orleans, La.; William Dillman, Pres., Mid-Continent Engraving Co., Wichita, Kas. Back row (left to right): Earl Bierbauer, Plant Supt., The Baring Press, Detroit; Chairman, J. Homer Winkler, Technical Advisor, Battelle Institute, Columbus, O.; Gifford M. Booth, jr., Pres., Grit Printing Co., Wichita, Kas.

Discussion

In an inquiry by J. Homer Winkler, Harry G. Wolfe was asked about the source of the values of the standards which he (Wolfe) had given in his address. Wolfe replied that they had been in use in the Davis, Delaney plant for a long time and that some of the measurements were taken from the company's own press records.

One gentleman in the audience arose to ask: "Why have two 11 pt. plate standards of 0.154 and another 0.152 in.?" It was explained that the difference in plate thicknesses is caused by the difference in the undercut on press bearers.

It was demonstrated that the PIA photoengraving specifications bulletin is in use in a number of plants and that the standards are being followed by photoengravers. In answer to a question from the floor, Wolfe stated it takes time to write out photoengraving orders fully, but under no circumstances should oral orders be issued. He said photoengravers do follow written specifications and are most cooperative in the New York area.

The perennial argument as to whether engravings and/or electrotypes should or should not be proved with the bearers arose. Walter Deye explained that during electrotype making operations removal of bearers represents a disservice to the printer.

E. O. Vandercook, President of Vandercook & Sons, Inc., said that his firm's four color presses had always been built with frisketing equipment. Proofs can be taken quickly. He said in some cases that if the dead metal were taken out a more true proof could be obtained. The engraver, however, can do his proofing either way.

It seems that in some sections of the country many customers will not OK a proof which has been taken with the bearers remaining on the plate. J. Homer Winkler spoke of the bearoff which occurs when using frisketing on a proof press. If the best proof is to be secured the bearer is to be removed.

In discussing the use of bearers on printing plates during platemaking operations, Walter Deye said that the engraver or electrotyper can take proofs with the bearers on and he can also take them without the bearers. In any event the electrotyper needs bearers during his platemaking operations. In cases where the customer demands proofs taken without the bearers he is charged for the removal and the replacement.

J. Gus Liebenow of Chicago stated that bearoff can be reduced by using cellulose acetate frisketing material on the proof press.

There was considerable discussion about tolerances in plate making. The argument was summed up by Joseph Schwartz of Westcott & Thompson Inc., Philadelphia, who stated that if the electrotyper is properly equipped he can secure plus or minus 0.001 in. over the large areas of plates. He admitted, however, that sometimes the human element interferes with tolerances.

Small and Medium Letterpress Printer Makeready Methods

ONE of the most interesting sessions of the R&E Council Makeready Meeting No. 2 held at Cincinnati's Hotel Sheraton-Gibson, Sept. 30-Oct. 1, was entitled *Makeready for the Small and Medium Size Letterpress Plant*. While the discussion was not confined strictly to press makeready, it appeared that the speakers' papers revolved around the important subject of makeready. In order to explain their particular techniques, a description of the plant was given by each speaker together with the types of work executed in each. The net result of the meeting was that *because* of the makeready problem each speaker demonstrated how he overcame his high costs and improved printing quality through selectivity of the kinds of work which could be handled profitably in his plant.

J. Homer Winkler, Technical Advisor, Battelle Institute, Columbus, O., presided as Chairman. Panel members consisted of Pres. Gifford M. Booth, jr., Grit Printing Co., Wichita, Kans.; Plant Supt. Earl J. Bierbauer, The Baring Press, Detroit; William Dillman, Pres., Mid-Continent Engraving Co., Wichita, Kans.; Supt. Sam H. Fitzpatrick, Press of H. N. Cornay, New Orleans, La.; Gen. Supt. Fred Pfister, The A. H. Pugh Printing Co., Cincinnati, O., and Supt.-Partner George Wise, Dugan-Millis, Inc., Cleveland.

After being introduced by Chairman Winkler, Gifford Booth said that solving some of the makeready problems was a by-product of attempts to eliminate some of the time-consuming makeup and lockup operations. He explained that his is a combination letterpress and offset plant. In offset he found there was a major appeal by being able to combine blocks of type with illustrations and hand lettering for added freedom in design. "Being primarily a letterpress house, our management and craftsmen were slow to adopt offset," Booth related. "We decided to try and solve the problems of tedious makeup and costly single engraving and the problem of difficult and long lockup and register problems . . . The answer was obvious to the extent that we could set body material on the machine in blocks of type and the rest of the copy could be prepared in units and given to the art department for pasteup, hand lettering and positioning of illustrations just as though it were to be an offset job . . . We consulted our engraver who proposed that we experiment with 11 pt. magnesium on patent base . . . After many trying hours we found suitable inks in all colors and cleaning fluids. We also found that magnesium plates could withstand tremendously long runs."

Booth explained further: "We found the original makeready time to be about the same as the makeready when running from wood-mounted plates. But because of metal against metal and the use of glass impregnated tympan paper, we had no downtime due to continual spotting up during the run. Within 15 to 20 min. the morning shift got into full press production. Because of normal wear in printing presses there is no way to completely eliminate makeready. But with the use of patent base and completely plated forms we have cut the downtime on the presses to a bare minimum."

The speaker concluded his address: "We have made a comprehensive study of the type of job that we can run strictly on the offset press or strictly on letterpress equipment, and we find we have both. But there is also that particular job which now can be run competitively by either process."

Plant Engineering

Earl Bierbauer discussed the importance of plant engineering with respect to production. He urged all executives present to pursue engineering methods when copy comes into the plant—that is, like the engineer, prepare a "blue print" of the job in hand together with the cooperation of all departmental heads. His address was somewhat similar to the report of one of Bierbauer's addresses published in the Sept. 1953 issue of *Printing Equipment Engineer*. He exhibited many examples of "engineered" jobs done in the plant of The Baring Press, Detroit. The quality results obtained led to a free discussion of Bierbauer's press makeready method. The Bierbauer method was also published in the September issue of *Printing Equip-*

ment Engineer, and appears on page 33 of this issue.

Fred Pfister discussed a laminated wood-plastic cut mounting base upon which he has been working. He stated that the base has not as yet been perfected but would be announced to the industry when fully developed. Pfister also stated that the first thing to do in trying to produce quality letterpress work is to eliminate the variables so far as possible. Records should be kept so that if the same problem arises again reference material will be available. Simple gauges and tools should be purchased and used regularly. Printed proceedings of other conferences should be purchased and referred to in plant operation.

Rotary Letterpress Benefits Through Co-ordination

To stimulate free discussion, Arthur N. Knol, Chairman and speaker of the Research & Engineering Council's session on *Organizing Makeready Procedure for Rotary Presses,* first detailed practices and methods used by his firm. This session was held during Makeready meeting No. 2, Oct. 1, Hotel Sheraton-Gibson, Cincinnati, O. Mr. Knol is responsible for all manufacturing in the W. F. Hall Printing Co. and its subsidiary, Central Typesetting and Electrotyping Co., Chicago. After Mr. Knol's presentation, the following panel members projected their experiences and answered questions from the floor: Perry Albaugh, Pressroom Supt., Meredith Publishing, Des Moines, Ia.; James A. Cole, Treasurer, Multi-Colortype Co., Cincinnati; Joseph H. Horton, Production Mgr., Capper Publications, Inc., Topeka, Kans.; John Maxwell, Rotary Pressroom Supt., W. F. Hall Printing Co., Chicago; James Sauer, Night Supt., McCall Corp., Dayton, O.; and Supt. Sylvester Streb, The Case-Hoyt Corp., Rochester, N.Y.

Discussion revealed that although the larger printing and publication plants make most of their own plates, smaller commercial houses, whose runs are shorter, must rely on the integrity of the platemaker for precision plates.

"What do the printers want?" asked one platemaker. "If we can determine through the printer the value of premadeready plates, for example, the responsibilities for producing these plates can be placed on the platemaker. No premakeready is going to be effective unless the plate is made to precision standards and properly packed on the press."

According to Chairman Knol, the information, the varied opinions, and the absence of factual data on many points, indicate that the Research and Engineering Council can serve an important function in co-ordinating the work of the platemaker and the printer. Better relationship, better understanding, maybe even agreement between the electrotyper and the printer may result.

Preparatory Work Begins with Inspection

Preparatory work in connection with makeready at the W. F. Hall Co. begins with the inspection of anything a customer furnishes in the way of a pattern. On faulty material, the customer receives a rejection slip showing in detail what is wrong with the plate with recommendations for correction. The customer then either authorizes correction or asks that the plate be used as is. Customer decisions are noted on copies of the slip which go to the job operator, the platemaking department, and the pressroom. All plates are proofed for quality on run-of-the-job stock and inspected for depth. Highlight edges are tooled and dead metal inserted wherever necessary before electrotype plates are molded.

Forms are not released by the Composing Room to the foundry until quality proofs are pulled and inspected by a proofreader trained to check for imperfections. Twice a day on both shifts, Linotype and Intertype slugs are checked for height and quality. Monotype casting is checked prior to casting each ribbon. All mounted cuts are rectified to correct height. In the plate specifications are given width of bearers and the space between the bearers and printing surface.

In each step of Hall's platemaking process, both in electrotype and stereotype departments, precautions for quality reproductions are taken. For example, in the electrotype department, edges are taped of all originals which are lead molded. All plates are flat-proofed and in addition are proofed after routing. They are marked up for any tooling of edges and checked for color separation by a Hall pressroom trained man. Meredith Publishing Co. chromes all of its plates for runs of over 300,000.

Plate Treatment

Mr. Knol reported that at present Hall is using only a face mat in platemaking although they have in the past used all types of treatment. He said: "We believe the success of treating with the face mat only lies in the skill used in the bumping operation—with the exception of our cast curved plates or Claybournized plates, all plates are bumped twice on a hydraulic press using a Hengst base and shaved with the treater on the face of the plate. There are occasions, however, when because of the nature of the plate, they are treated by hand by an electrotype finisher.

The type of job determines whether you treat or not and what kind of treatment is to be used. Pressroom superintendents at Hall's determine whether a job is to be treated or not. If it is not to be treated, the conventional chalk overlays are automatically made. Mr. Maxwell described chalk overlays as treatment in reverse—you put it on the plate instead of on the packing. The chalk overlays are used on single impression presses and on jobs on cheap printing paper. Hall gets better results on stereotype plates. The chalk overlays used consist of a 4 pt. base sheet plus a 4 pt. chalk relief and an additional 3½ pt. sheet pasted to the face of the chalk and cut out by hand for any additional relief on treated forms.

(*Continued on Page 60*)

National Printing Equipment Assoc. Holds Annual Meeting—Members met at Hotel Shoreham, Washington, D.C. Here are shown the men composing the new board of directors elected at the Membership meeting, Wednesday, Oct. 7. Immediately after adjournment of the membership luncheon, the newly-elected directors elected Association officers for the coming year.

In the above illustration, seated, left to right, they are: NPEA President, Richard B. Tullis, President of Miller Printing Machinery Co.; Philip P. Merrill, General Mgr., Ludlow Typograph Co.; Fred S. Tipson, Treasurer, T.W. & C.B. Sheridan Co.; Edward G. Williams, President, American Type Founders, Inc.; J. Wesley Lee, General Mgr., Challenge Machinery Co.; Donald C. Cottrell, President, C. B. Cottrell & Sons Co.; Howell G. Evans, Vice Pres.; Hamilton Mfg. Co.; Harold T. Simpson, President, Printing Machinery Co.; NPEA Secretary, James E. Bennet (home office at 140 Nassau St., New York, N.Y.)

Standing (left to right): NPEA Vice Pres., Martin M. Reid, President of Mergenthaler Linotype Co.; Harry G. Willnus, President of Intertype Corporation; R. V. Mitchell, Chairman of the Board, Harris-Seybold Co.; NPEA Treasurer, John W. Coultrap, Miehle Printing Press & Mfg. Co.

It was decided to continue substantial support to the Graphic Arts Educational Council for the coming year. President Tipson, in his report to the membership, stated that all in all, company members of the association and industry in general had experienced a good year. He also remarked that Yankee ingenuity among Association members would find a reasonably satisfactory solution to the equipment import problem.

Three new member companies were accepted into membership as follows: Russell Ernest Baum, 615 Chestnut St., Philadelphia 6, Pa.; Keybase, Inc., Bell St. at Tenth, Shawnee, Okla., and Geo. F. Motter's Sons, 132 So. Pershing Ave., York, Pa.

Pacific Mechanical Conference Stereo Session Panel—Starting at left: Fred Steel, Phoenix (Ariz.) *Republic* and *Gazette* George Buur, R. W. Ernest Printing Co., Los Angeles; behind the mike are A. V. Bybee Ogden (Utah) *Standard-Examiner* and General Conference Chairman Henry (Tony) Messina, Los Angeles *Herald-Express* Elmer Colwell, Los Angeles *Examiner* Chairman of the meeting; Harry Lindsay, San Diego (Calif.) *Union-Tribune* Edward Conley, San Francisco (Calif.) *Chronicle* Norman Strauss, Los Angeles *Herald-Express*.

Pacific Conference In Los Angeles Largest Yet Held

By FRED MOYER, sr.*

**Chief Composing Machinist, Los Angeles Daily News, and Secretary, Southern Div., Pacific Newspaper Mechanical Conference.*

The Pacific Newspaper Mechanical Conference was held in Los Angeles at the new Statler Hotel, September 25, 26 and 27. It was by far the most successful meeting yet held — most successful both from number of delegates in attendance and as to interest in all meetings and discussions. The registration list showed that 496 delegates attended. Some of these executives traveled many miles to attend. From Western Canada, Washington, Oregon, Idaho, Montana, Utah, New Mexico, Arizona, Nevada and California they came. This means that many of the delegates traveled several thousand miles to Los Angeles.

This year the conference made some changes in its program arrangements. Instead of the group clinics, all sessions were held in one assembly hall. Time was allotted to each craft, with a chairman and a panel made up of outstanding authorities from different departments. The machinists and engravers each held separate meetings in addition to the general assembly.

There were 70 delegates and supply representatives at the Machinists' group clinic, which was presided over by Coleman Wright, machinist of the San Bernardino (Calif.) *Sun*. This session lasted 3 hrs. and many things were discussed, including: Maintenance, new equipment, the Fotosetter, Teletypesetters, tricks of the trade, etc.

The Engravers' separate group clinic was presided over by Harry Davidson, Mechanical Supt., San Francisco (Calif.) *Call-Bulletin*. There were about 30 present and many problems were discussed.

Portland, Ore., was named the meeting place for the 18th Pacific Newspaper Mechanical Conference, and William E. Gibbons, Production Mgr., Portland (Ore.) *Journal*, was selected President. Mr. Gibbons accepted the presidency by telephone, as he was unable to attend. Don Newhouse, Production Mgr., Portland (Ore.) *Oregonian*, was named Secretary and accepted by telephone. Mark Mossing, Seattle (Wash.) *Times*, was elected Vice Pres. for Washington. A Vice Pres. for Oregon will be appointed by Mr. Gibbons. This will add four new officers to the list for this conference. The Pacific Newspaper Mechanical Conference, because of the great attendance distances involved, elects officers each year from the city in which the conference will meet. In this way all arrangements for the meeting are made by local officers. The new officers represent the Northwestern division.

The officers for the Southern and Central divisions were re-elected and are as follows: William Weigand, Mechanical Supt., Glendale (Calif.) *News-Press*, Vice Pres., Southern Div.; Fred J. Moyer, sr., Machinist, Los Angeles *Daily News*, Secy., Southern Div.; Mervyn Keegan, Press Foreman, San Francisco (Calif.) *Shopping News*, Vice Pres., Central Div.; and Edw. N. Conley, Press Supt., San Francisco (Calif.) *Chronicle*, Secy., Central Div.

The officers from the Northwest division will be in charge of all arrangements for the 18th Conference to be held sometime in Sept., 1954.

Pacific Mechanical Conference Personalities — From left to right at the recent PNMC are: Al Tennyson, Composing Room Supt., Los Angeles *Times-Mirror*, 1952-1953 Conference President; L. L. McFall, Mechanical Supt., San Bernardino (Calif.) *Sun*, first President and really founder of the conference; Henry Messina, Mechanical Supt., Los Angeles *Herald-Express* and General Conference Chairman.

William A. Frangos, Inc., has acquired new headquarters at 241-10 Hillside Ave., Bellerose, Long Island, N. Y. The new building provides 14,000 sq. ft. The company manufactures offset plate coatings, etches and other chemicals.

The 1000th Original Heidelberg platen press to be installed in Australia was recently placed in operation in the Letterpress Dept. of the Melbourne School of Printing and Graphic Arts. The press was made available through Messrs. Seligson & Clare (Australia) Pty. Ltd. and the Heidelberg Company for instructional purposes.

EXHIBIT SPACES ARE GOING FAST

Miniature plats have been mailed to equipment and supplies manufacturers showing number and arrangement of the display booths for the Great Lakes Mechanical Conference. The conference will be held at Hotel Claypool, Indianapolis, Ind., Jan. 10-11-12, 1954. A limited number of spaces remain to be engaged. Manufacturer and supplier companies wishing to engage space should get in touch promptly with

PRINTING EQUIPMENT *Engineer*
1276 West Third St.
Cleveland 13, O.

Wood Equipment Installed for Color Printing — Several pieces of equipment manufactured by Wood Newspaper Machinery Corp. have been installed by the

Catholic Press Society, Denver, Colo., for r.o.p. color printing in its new plant facilities. The installations include two Wood Heavy Duty Pony Autoplates equipped with Pony pumps, pneumatic pumping devices and water cooled arches. Shown above is one of the two Wood Color-Plate Pre-Registering Automillers to be installed for use with a new tension lockup press.

Variable Results Demonstrated In 4 Page Section

A CAREFULLY prepared graphic presentation regarding reproduction qualities of various types of original and duplicate printing plates was distributed at the recent Pacific Newspaper Mechanical Conference. The four page section was printed from stereotype plates with regular news ink on newsprint stock. Halftone comparisons showed results obtained from photoengravings with varying screen depths and varying screens. Also shown were comparisons from the original zinc halftone, electrotype and plastic plates, the stereo flat cast, and the second stereo flat cast and even a "granddaddy" reproduction.

The section was issued particularly for the benefit of advertising agency men attending the conference.

In the context of the article on page 1, it is mentioned that in spite of conferences between advertising men and newspaper mechanical executives confusion about reproductive qualities of form materials still exists, progress in better reproduction has been hindered and the chasm widens as the two sets of people differ.

It is suggested to the advertising executive that "the key to better reproduction lies in getting better acquainted with the engraver by giving him complete information about your program and allowing him time to properly execute it."

It is also asserted in the article that newspapers work from vastly different materials than magazines. "We need to divorce our thinking from magazines and strive earnestly to improve our product and thus enhance our mutual interests through improved understanding."

It is obvious that no one set of standards exists in the newspaper printing industry, except, as in the case of the commercial printing industry, everybody is agreed that type high is 0.918 in. One newspaper may have ½ in. stereo mat shrinkage, while others employ variable shrinkages cross-wise of the page up to as high as 1¼ in. The existence of manipulating variables in stereo mat molding is a long story. However, there are indications that the publishers are slowly commencing to realize the benefits to be derived from uniform engraving and stereo mat shrinkage procedures. Also shown were the poor reproduction qualities of granddaddy stereo mats which advertising executives just don't seem to understand.

The crux of the situation is clearly implied in the following paragraph addressed to the advertiser and his advertising agency:

> "For obvious reasons, the conference can make no positive recommendations of materials or procedure. Each operation functions under different conditions and varying speeds, all of which affect reproduction. Advertisers should familiarize themselves with these local conditions and govern themselves accordingly. National advertisers should arrive at a norm which will reproduce well in the majority of cases."

Printing Equipment Engineer congratulates those executives responsible for the tremendous amount of work involved in assembling the informative reproduction material contained in the four page special section distributed at the Los Angeles Conference.

Perhaps, before too long a time, the advertising agency people, the publisher's representatives and mechanical executives can get together to form a sound basis from which to work in a cooperative endeavor. This is the only road leading to consistently good newspaper reproduction.

High Shrink Techniques

For stereotype dry mats — Molding combinations, drying of mold and metal temperature and casting box cooling

By FERD MIER*

**Stereotype Supt., The Detroit* Free Press.

Abstract of paper delivered before Pacific Newspaper Mechanical Conference, Statler Hotel, Los Angeles, September 1953.

WE HAVE today those doing outstanding reproductive work with stereotype mats, employing reductions from the newspaper page form up to 1¼ in. Apparently this work is being done due to a thorough understanding of the fundamentals of handling a so-called dry mat. A dry mat is a piece of paper that is neither dry nor a mat. It is a hydrated, machine-made, chemically impregnated piece of cellulose pulp that is capable of receiving and retaining the impression of a type form and being heat-resistant when dry and capable of reproducing with a high degree of fidelity the material contained in that form.

The stress in the foregoing is on the word *capable*. How capable depends upon how well the individual understands the fundamentals of reproductive stereotyping. There are no easy routes to good printing. There are no panaceas for ignorance.

These fundamentals are wrapped up in the end product—the printing surface of the stereotype plate. Give a pressman the proper surface on the plate and he must print a good paper in spite of all he may do. Give him a poor surface and nothing he can do will help him print a good paper.

What Is a "Good Surface?"

I can see some of you are thinking that it is easy to say "Give him a good surface," but you do not tell us how. I cannot tell you how to accomplish this ideal surface in your specific operations. It is possible, however, to draw certain salient facts to your attention that will allow you to accomplish this for yourselves, in your own plants, with a little thought and effort and a great deal of cooperation from the other mechanical departments, and your employer.

Establish Operating Standards

The establishment of standards of operation in all departments is the first step towards a properly printed paper. In the composing room this means material and forms made up to specifications for a stereotype operation. Chases should be type high and true. Column rules should be 0.915 in. or 0.914 in. high. Halftones based at an established standard over type high. This you must determine in your individual plants. Type matter should be standardized as to height. The use of solid base material for electrotypes, plastics, and stereotypes contribute much toward standardization of a form for the stereotype process.

Molding Combinations

Much has been written and more said about molding combinations than any other facet of the stereotype process. Inasmuch as it is the one of the three most important operations in the process, it is understandable that the multiplicity of ideas and the wide variances of opinion will undoubtedly continue. At the risk of saying things you have undoubtedly heard before, I would like to implant the idea of a firm, hard, multi-piece molding combination in your minds. This type of combination fulfills the necessary requirements of the molding functions. These functions have been outlined as:

(1) To deliver only the space depth required to print cleanly, as determined by the requirements of the pressroom.

(*Continued on Page 59*)

Self Advertising Awards Presented—Winners of $3 thousand in cash prizes, Benjamin Franklin statuettes and other awards in the Second Annual Printer's and Lithographer's Self Advertising Competition were announced during the Printing Industry of America convention, Hotel Shoreham, Washington, D. C., Oct. 5-7. The contest was sponsored jointly by PIA and Miller Printing Machinery Co. A total of 187 separate firms submitted 325 entries in the 1953 contest, compared with 429 entries from 225 firms in 1952. The presentation of awards was made at a breakfast meeting by Miller President R. B. Tullis. The first and second prize winners in the different divisions of the competition are shown above holding their statuette awards, from left to right, as follows: James G. Nichols, Fine Arts Litho Co., Dallas, Tex.; Paul J. Brown, South Shore Printers, Chicago; Ralph Poole, Forbes Lithograph Co., Boston; Wm. M. Brown, jr., W. M. Brown & Son, Inc., Richmond, Va.; Vernon K. Evans, Veritone Company, Chicago; Kenneth W. Finlay, Finlay Brothers Co., Inc., Hartford, Conn.; A. H. Gratz, Herbick & Held Printing Co., Pittsburgh, Pa.; Arnold D. Kates, Mailograph Co., Inc., New York, N. Y.; and Gaylord Donnelley, R. R. Donnelley & Son, Chicago.

PIA Theme: Good Management

Members in convention in Washington, D. C., hear speakers discuss means for helping low-profit industry

FOLLOWING the theme *We Must Do Better* offered by PIA President John M. Wolff, the 67th Annual Convention of the Printing Industry of America, Inc., convened on Monday morning, October 5, at the Hotel Shoreham, Washington, D. C. Attendance was approx. 1,300 people.

In his report to the PIA membership, Wolff, who is Vice Pres. of Western Printing & Lithographing Co., St. Louis, said net corporate profit for the commercial printing industry dropped from a record high of 6.54 per cent of net sales in 1946 to 3.75 per cent last year.

Trends in Industry

Referring to a number of current trends in the Graphic Arts, Wolff named the trend toward greatly enlarged capacity. "It will always be necessary to have the general commercial printer, but it is true that more general commercial printers will be specializing in one way or another." Continuing, he said: "There are several courses to follow in seeking an increase in productivity. The basic course requires elimination of obsolete methods and equipment and careful planning to see that your plant is continuously being improved."

Another part of Wolff's report dealt with the trend toward negligence in developing human relations programs by printing companies. He mentioned the PIA Foreman's Management Training Program and added: ". . . that it required a major selling effort to persuade companies to participate in this fine program."

Following on the program was a report by PIA Vice Pres. James J. Rudisill, who is President of Rudisill & Co., Lancaster, Pa.

GPO Operation

In his address entitled *Five Months at the Government Printing Office,* Public Printer Blattenberger said it was his objective to see that the government obtains its printing economically and efficiently. Blattenberger revealed he had found it possible to reduce overhead expenditures for the next year by over $882 thousand and added, ". . . I expect this reduction to be accomplished without any noticeable reduction in efficiency or service."

The Public Printer justified the existence of the GPO with the statement there are occasions when the government must be assured of having a tremendous volume of printing produced almost overnight. He said he expected the extra commercial procurement of printing to continue.

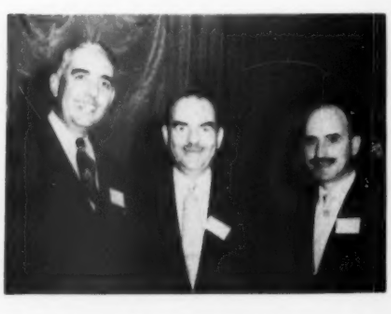
Keynote address of the Convention was delivered on the subject *Freedom and The Printed Word* by Walter Williams, Under Secretary of Commerce and Assistant to the President. Mr. Williams' talk was devoted to current problems relating to the national budget. He called upon the printing industry "to help see to it that the 160 million citizens of America become the best informed people on the face of the earth" by providing quantities of printing for their use.

The first business session was ended with the presentation of the A. F. Lewis Graphic Arts Man-of-the-Year Award to Public Printer Blattenberger and the report of the PIA Board of Directors Nominating Committee by PIA Past Pres. Arthur A. Wetzel, President of Wetzel Brothers, Milwaukee, Wis.

Managing Plant In a Recession

AFTER two speakers had finished their respective addresses during the Sales Management meeting, PIA convention, Hotel Shoreham, Washington, D. C., on Monday, October 5, the audience did not participate in a general discussion. It appears that the speakers had discussed all of the cardinal points to be observed by management in a sellers' market or during a business recession. The complete addresses will be published by Printing Industry of America, Inc., at a later date. The keynote of both speakers' addresses was preparedness by management when conditions tighten up.

William H. Walling, Rogers-Kellogg-Stillson, Inc., New York, N. Y., presided and introduced each speaker: William Paul, The Warner P. Simpson Co., Columbus, O., and Harold R. Long, Kable Printing Co., Mt. Morris, Ill.



Managing a Plant in Recession — Managing a printing plant in lush times isn't too difficult if you have managerial ability. However, times are not always lush. These men spoke upon plant management when it is necessary to tighten the belt, so to speak. From left to right, they are: Harold R. Long, Secretary, Kable Printing Co., Mt. Morris, Ill.; William H. Walling, Chairman of the Board, Rogers-Kellogg-Stillson, Inc., New York, N. Y.; William Paul, Sales Mgr., The Warner P. Simpson Co., Columbus, O.

Today We Sell—Or We Sink

"I think we, as Graphic Arts executives, have lost our balance in the last few years," asserted William Paul of Warner P. Simpson Co., Columbus, O., at the PIA Sales Management general meeting of the Printing Industry of America, on Monday, October 5, Shoreham Hotel, Washington, D. C. "Now we are emerging from a period of lush living, where little effort has been necessary to sell merchandise. Our business generally has been operating in a favorable sellers' market. Every indication points to a change in this condition. Once again we'll be competing for the American dollar. Today we sell—or we sink."

Among Paul's pithy statements we quote the following: "We Graphic Arts folks have to think more in terms of creating new markets and less in terms of selling existing, competing markets . . . Our production (industry in general) has always had the advantages of science while our selling has not . . . I have found little, if any, advertising agency allegiance toward printing suppliers. My experience has shown that allegiance between the advertiser and his printer is more the rule than the exception . . . Have you ever heard of diversification? Diversification is one of the purest forms of creative selling . . . Successful specialization does not rule out the soundness of offering a new service . . . A small printer can be just as creative as a large one. All you have to do is to train yourself to think creatively."

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Newly Elected President of Printing Industry of America is James J. Rudisill (left), President of Rudisill & Co., Inc., Lancaster, Pa. Rudisill, a graduate of Carnegie Institute of Technology, has been active in PIA circles since 1945 and organized the present Rudisill firm in 1939. Elected vice president of PIA at the Washington convention was William H. Walling (right), Chairman of the Board, Rogers-Kellogg-Stillson Co., Inc. New York, N. Y. Associated with the same group of printing companies for 33 years, Walling has also served as president of the New York Employing Printers Assoc. He held the office of secretary of PIA last year. Other officers of the PIA are: Secretary, Felton Colwell, The Colwell Press, Minneapolis, Minn.; and Treasurer, Elmer M. Pusey, Judd & Detweiler, Inc., Washington, D. C. Elected president of the Master Printers Section of PIA was Lyman Jones, Laurance Press, Cedar Rapids, Ia. Arthur Snapper of Milprint, Inc., Milwaukee, Wis., was re-elected president of the Union Employees Section.

Control and Adjustment of Expenses in Declining Sales Market

A business preparatory address for management was presented by Harold R. Long, Secy.-Treas., Kable Printing Co., Mt. Morris, Ill. The address is summarized here in extremely brief form for the benefit of many of our plant manager, production and mechanical executive readers who may not have experienced the necessity for "trimming sales" in plant management during recession periods.

Long stated: "Good business management requires that both sides of the economic picture be considered . . . In spite of the desire for continued levels of prosperity, our type of economy does have its declines as well as its upswings . . . A company that does not know its costs and acquires business at prices below cost is hastening the day of bankruptcy. Today's economic picture is tending toward some decline in business activity . . . By planned action, alert managements should be able to successfully guide their respective companies through any kind of economic storm."

Break-even Chart

The speaker stated that one of the first duties of the alert manager is to determine the effect of changes in sales volume on the profit of the company. One management tool that can be used to measure the effect of a sales drop on profits is the breakeven chart. A sample of the chart was passed through the audience. Anyone can make the chart by following the simple instructions enumerated.

Management Weaknesses

Long discussed some of the more common weaknesses of printing companies which must be corrected if a cost-reduction and profit-increasing program is to be effective, some of which are: (1) Poor organizational setup; some companies have weak lines of authority, duplication of authority, or time-consuming and responsibility-shifting committees. An organization chart should be prepared; in it, each division head should be given authority to operate his division according to a definite plan. (2) Be sure your key men are loyal and are productive. (3) Production costs are reaching a very dangerous level; because labor is now more semi-variable than before, it is more important than ever to examine all other cost items for cost reductions. He urged use of the PIA Ratios for Printing Management for easily detecting a weakness which if corrected may save thousands of dollars. (4) Inadequate accounting controls, and (5) Inventory controls.

Steps To Take

Long said that if a recession hit suddenly, he would suggest the following steps be taken immediately: (1) Prepare a realistic sales budget; (2) Shift production schedules around to eliminate overtime by attempting to put non-profitable jobs on a profitable basis and reducing

(*Continued on Page 48*)

Improving Management Techniques Panel—These men discussed tools for management books published by Printing Industry of America, Inc. Their talks were of absorbing interest to members attending the PIA convention, Hotel Shoreham, Washington, D. C., Oct. 5-7. Left to right they are: Harold W. Braun, Fetter Printing Co., Louisville, Ky.; Horace Hart, General Mgr., The Leo Hart Co., Rochester, N. Y.; Chairman Kenneth P. Morse, General Mgr., Standard Register Co., Dayton, O.; Robert H. Roy, Dean of Engineering, Johns Hopkins University, Baltimore, Md.; Harry L. Gage, Consultant, Mergenthaler Linotype Co., Gloucester, Mass.; Donald E. Sommer, PIA Technical Director, Washington, D. C.

The ABC of OFFSET

For Letterpress Printers

Series Two

By George Jos. Lenzer

XVI—STAINING THE HALFTONE

IS STAINING the halftone practical? To many believers in tradition the answer is *yes*, but in the face of fact and the ultimate reason and purpose of the halftone negative and positive, the answer is *no*, with few exceptions in isolated cases and instances.

It will be remembered that continuous tone image graduations of tone, densities and degrees of transparency are not present in the halftone image. Only the extremes of clear transparency and opacity are present in the halftone. All tonal graduations are effected by variations in the size of the half-tone dots.

In review of earlier discussions of the halftone dot we learn that there are two kinds. Those dots of varying densities produced in the camera through a halftone screen and those of uniform density as obtained by contact printing.

In platemaking, both negatives and positives of the contact halftone are most effective and efficient regardless of the platemaking process, albumen, deep etch or multi-metal. The halftone dot being stencil-like in shape and sharpness will reproduce exactly on the printing plate, and facsimile reproduction of the halftone image is assured because of this feature.

By reason of the opacity of the halftone dots and the surrounding clear transparency of the photographic emulsion, it is evident that the activating light rays will more easily be transmitted so as to harden the plate sensitizer through its full thickness to the metal surface, which is essential to to good platemaking.

Applied stain will not alter the dot size or shape. It will only color the transparent areas surrounding the dots and will act as a light filter. In platemaking, the stained area, during exposure to the printing plate, will withhold the passage of the light and will effect an underexposure of the plate sensitizer. The sensitizer will not be hardened to the full depth and by reason of the underexposure will throw the entire processing procedure out of kilter.

Because uniformity in process timing is essential to good platemaking, it can readily be seen that many difficulties will result because of the filtering action of the stain. Those areas affected by the stain will tend to walk away when on the press, or they may print as a scum, or in some instances may not print at all, or else go to the other extreme and print solid.

This effect is most noticeable when stain is applied to a camera type halftone negative. The applied stain will intensify the penumbral edge of the dot, tending to make it more opaque to its greatest degree of density. Since each dot cannot be stained individually, it is evident that the surrounding transparent areas will be stained or dyed to a degree equal to the stained dots.

In this instance, it is obvious that where the desired effect has been accomplished, printability of the printing plate has been impaired. As was previously pointed out, all processing standards and procedures in platemaking have been upset and good printing plates cannot be guaranteed or assured.

Photographic Contacts

Since the deep etch process requires a halftone positive for accomplishment, it frequently becomes necessary to use a camera type halftone negative as the contacting image.

Let us refer to Chapter XV of this series, and review the effects of stain and the relationship to color filters, safe lights and color sensitivity of photographic emulsions.

The procedures outlined in Chapter XV should be followed in staining and correcting with stain. Applied stain of the proper kind and color will only tend to serve as a color filter, and in this sense will not materially cause any underexposure of the negative emulsion because of the extreme sensitivity to light, of the film being contact printed.

There is this wide difference in the effectiveness of stain and the purpose to be served. Only the densest part of the halftone negative can be stained effectively, that is, the highlight side of the negative. Here, in addition to intensifying the penumbra and halo of the halftone dot formation, the stain serves as a color filter light refractive in the transparent areas of the image.

On the shadow side of the negative, stain will serve no real purpose because of the smallness of the dot sizes and the vastness of the transparent areas surrounding the dots.

By facing the facts as they have been presented, it should be evident that correction of the camera type halftone negative can be accomplished to a more efficient end by chemical manipulation, *i.e.*, intensification and reduction, than by staining.

'tis said that practice makes perfect. Application of stain requires understanding and realization of the ends to be served. They who do staining without proper knowledge or understanding can become perfectly bad correctionists, while they, who understand the limitations of applied stain, can be perfectly good correctionists.

The when, where and how to use stain is important and should not be treated lightly.

Blending

This is one of the most difficult and little understood difficulties facing the retoucher and correctionist. The blending and graduation of tones can be a real headache to the artist, cameraman and platemaker if it is not done properly.

Here the airbrush is a valuable tool for effecting a satisfactory blend, especially when the tone must blend into a hard or sharp opaque line, as in a continuous tone negative.

Instead of relying entirely upon stain as a blending medium in such instances, the fine spray of an opaque liquid pigment such as India ink will prove to be far better to effect the blend or graduation of tone. This is because the fine droplets of pigment will tend to simulate the silver granules comprising the negative image. It will be seen that the actual transparency of the negative is not impaired, as can be the case where stain is applied to the emulsion.

The airbrush technique can be applied to the halftone negative or positive with much the same satisfying result. It must be remembered however, that the effect will be different from that in the continuous tone image. In this instance the fine droplets of opaque pigment will settle in the transparent areas of the transparency and will appear, under close inspection, as a scum in the printing plate. It is important then, to know when, and under what circumstances the airbrush can be used safely.

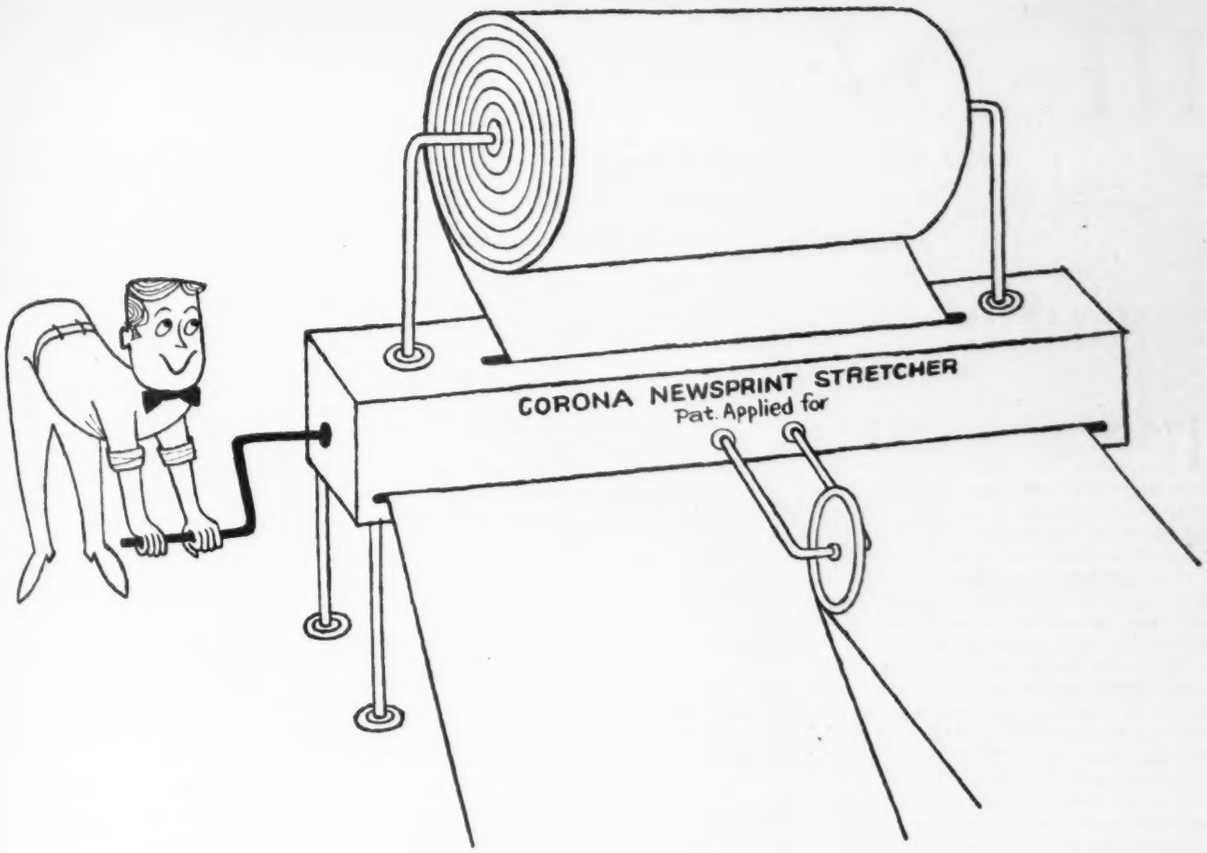
Mechanical Shading

In the halftone negative or positive we must depend upon absolute opacity of the dots and the unimpaired transparency of the clear areas comprising the image. To make corrections and still retain the photomechanical character of the halftone image, the artist has recourse to the mechanical shading machine and screens, such as the Tintagraph or Ben Day.

With this type of equipment, the correctionist can add half-tone dots to areas where no dot appears but is necessary. Where dots are too small, he can enlarge them.

Since the mechanical shading machine screens can be shifted with micrometrical precision to different positions, it is possible to effect smooth and even graduations and blending of halftone tints. It is

(Continued on Page 53)



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III—*Inks*

For Rotogravure Printing— Drying, Consistency, Thinners for Proving and for Production

By AXEL LUNDBYE*

**Kable Printing Co., Mt. Morris, Ill.*

THE drying of the ink in rotogravure printing is done entirely by evaporation, while the inks used in letterpress and offset are dried by oxidation and/or penetration. As already stated, the speed of evaporation can be controlled by adding slow or fast solvents.

One question that might be asked: Why not use extremely fast solvents to be sure that the ink will dry thoroughly, even at very high printing speeds?

That would be fine if that was the only factor under consideration. However, if the rate of evaporation is too fast, the solvent will disappear too quickly from the fountain, even though the so-called enclosed fountains are used. The ink will thicken to a viscosity (become less fluid) and because of this, the ink film will be too heavy. Furthermore, chances are that the ink will dry in the intagliation, and therefore, the printing will be out of balance with the ink. In addition, the heavier ink will wear out the cylinder at an excelled rate. It will not lay correctly, and furthermore, it is possible in that case that it might even dry up the ink in the intagliation and printing will stop. If it doesn't go to that extent, we might say, why not speed up the press to overcome the drying up in the cylinder. That is perfectly all right, but even the high speed presses today have a limit.

Hold Drying Oven Heat to Minimum

To slow down the evaporation rate, the solvent necessarily will correspond to slow press speed or additional heat and/or ventilation. Heat will expedite evaporation of the solvent, and consequently the drying. But it is considered a good printing practice to hold the heat in the drying oven to a minimum, and the air blast is considered the best method of drying the web because the movement of the air will carry away the vapor laden air, and fresh air will readily assimilate additional solvent vapors.

When printing on plastic and similar materials, as well as metal foil—that is, material that will not let the ink penetrate into its surface, heat when used will not alone speed the evaporation rate, but will fuse the ink to the surface, and in this manner increase the adherences.

When several colors are printed on top of each other, the colors must be absolutely dry before going to the next impression. If not, look for trouble.

Consistency of the Ink

The ink should have a low viscosity and low surface tension—both being relative, and the most important factor is that it must have excellent flowing characteristics. If these three properties are perfect, and the etching shell is made for the ink and paper, then the ink will lay perfectly, and the printed result should be excellent.

If the three properties of ink are not in balance, then the intagliation will not be filled properly, and if the cohesion of the ink to the intagliation is not sufficient to hold the ink in the cells during the centrifugal pull which will be in effect when printing at full speed, we will lose some of the ink before impression, and we will not obtain the reproduction we are looking for.

The final controlling factor for the ink is the printed result, and it must be adjusted to this end. As stated earlier, the speed of the printing press has a lot to do with this condition. The higher the speed of the press, the thinner should be the ink. Yet it must still have enough adhesive power to cling in the intagliation so that the centrifugal pull will not deplete the shell before impression. If ink becomes too thin, then the final printing product will indicate strikethrough, feathering, and poor definition in the printing. If the doctor blade is not properly set, it will have a tendency to pull the ink out of the intagliation. Too heavy an ink will produce poor detail. In other words, it will not flow properly, it will dry too quickly and set up in the intagliation, indicating lack of tone value and no smoothness in the spread. In short, it will not lay properly.

The question has been asked many times: When we use a chrome plated cylinder, will the standard ink adhere to the chrome? Here we lack quite a lot of information. But we do know from other methods of printing, namely, the bimetallic plates used in offset printing, that chromium is in the extreme limit of water receptiveness, and copper is in the extreme limit of ink receptiveness. Therefore, the question occurs: Is chromium the right material to use for ink receptiveness in rotogravure printing?

Many plants have run into difficulty because of scratches on the cylinder. In one of the larger rotogravure plants, all of a sudden these scratches became more prevalent than they had for a long time, and we suggested that they filter the solvent. After quite a lot of opposition, this was done. After filtering only 5 gal., we counted better than 100 particles which were visible to the naked eye. These particles were steel, aluminum and oxides, hard, and large enough to scratch the cylinder if loose under the doctor blade. Now this plant is filtering all the solvent before pouring in the ink fountains.

Another large rotogravure plant that uses the solvent recovery system and draws the solvent out in the bottom of this system, started to filter the solvent also. Considerably large metal and oxide particles were found. The only place they could come from is the metal walls in the recovery system.

Selection of Thinner for Proving Press

A proving press may be a special low speed press designed for proving only, or it may be a production press run at a sufficiently low speed, say 50 to 200 f.p.m., to see what is in the etch of the cylinder. Since proving is done at low speeds, it is necessary to employ a fairly slow drying ink. A fast drying ink would dry in the shallow etchings of a cylinder between the doctor blade and the point of impression. It is well known that dried-in ink does not print. Up to a decade ago,

(*Continued on Page 52*)

Getting Margins Right On Saddle-stitched Book

How to get correct margins on a saddle-stitched book of say twelve 16-page signatures before makeup of forms? Get sheets all of the same exact size as sheet size specified for the job. If 25 by 38 in., all the sheets should be exactly that size. Fold the 12 sixteens carefully and insert them, one inside of the other to make a blank dummy. Saddle-stitch the dummy after carefully jogging the loose sixteens to the top and saddle-back edges. Paste a proof of a full size page on page 1 of the blank dummy in required position. Place a sheet of chipboard on the table of the paper cutting machine. Next place the saddle-back edge of the dummy against the back gage of the cutter. Advance the back gage to push dummy forward until its outside edge is far enough in front of the cutter stick for stabbing; bring down the clamp and with a knife blade make two cuts *all the way through the dummy* at each corner of proof page 1, one cut in line with the top, the other in line with the side of the page *at each of the four corners*. These cuts afford reliable corner gages for making up to retain correct margins on all saddle-stitched books and pamphlets.

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Patents

For The GRAPHIC ARTS

Covering patents issued August 4, 11, 18, and 25.

Binding, Cutting, Perforating:

2,648,064. THIS WIRE-STAPLING or stitching machine is for use in the production of books. A stitcher head is employed for applying staples to the sheets. An angular adjustable conveyor way supports the sheets while they are fed through a stitching position for the application of the staples. A pair of feed members grip the sheets on the side of the stitch line remote from the stitcher head to feed the sheets along the conveyor way through the stitching position. The feed members are supported in gripping relation to the conveyor way in the various angularly adjusted positions of the latter. The feed members are intermittently actuated in synchronism with the stitcher head. Invented by William James Cuthbert, Enfield, Eng. Assigned one half to British Brehmer Ltd., Enfield, Eng. Application Dec. 24, 1951, in Great Britain, Jan. 1, 1951. 3 Claims.

2,648,445. BOOK FEED MECHANISM FOR TRIMMING MACHINES. A pair of carriages are slidably mounted on a frame for movement toward and away from each other. A hopper comprises two separate side sections mounted on their respective carriages and coacting to support a stack of books in upright position. A hopper bottom plate is hingedly connected to adjacent ends of a main track mounted on each carriage. An endless chain on each carriage has its inner flight only disposed to coact with its companion chain to move a book from the bottom of the hopper and along the tracks. Spaced lugs engage and move the books. The height of the hopper bottom plate is adjustable relative to the lugs, and the angle of the plate is adjustable relative to the plane of inner flights of the endless chains. Invented by Carl A. Roessl and Robert P. Fendius, Chicago. Assigned to C. L. Moyer Co., Chicago. Application Aug. 30, 1950. 4 Claims.

2,649,120. MACHINE FOR BINDING BOOKS. The machine is designed to accept a book of unbound sheets having a series of prepunched holes along one edge. A helically coiled wire of proper diameter and punch is formed and inserted through the holes. The coil is controlled to proper length and, after being inserted, is trimmed and the cut ends thereof are folded to prevent its removal from the book of sheets bound thereby. Invented by Milton H. November, East Orange, N. J. Assigned to Spiral Binding Co., Inc., New York, N. Y. Application July 2, 1948. 27 Claims.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

2,649,154. THE PAPER CUTTER is of the kind used in printing establishments. Hydraulic equipment raises and lowers the knife. A member movable from a neutral position to a first operative position causes the equipment to lower the knife. In a second operative position, the member causes the equipment to raise the knife. Means tend to retain the member in neutral position. A movable latch cooperates with the member and is biased to engage and hold the member in second operative position. Means are rendered effective when the knife reaches the top of its stroke to activate the latch and release the member. Invented by Joseph Adrian, Cleveland. Assigned to Speed Printing Machinery, Inc., Cleveland. Application Aug. 26, 1950. 8 Claims.

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Composing Room:

2,647,326. PRINTER'S GAUGE. Gauge is provided for use in lining up printing forms in a printer's chase employed in the printing of books, etc. The gauge has guide means adjustable with respect to different sized chases. Adjustable margin indicating means are set in accordance with the desired margins for an aligned row of forms across the chase for positioning the forms, and those of succeeding rows by slidably moving the gauge as to the respective rows extending in one direction. This may also be done with respect to rows in the other direction. The desired marginal spaces and forms carried by the chase are accurately effected without the necessity of repeated marginal settings. Invented by Charles C. Sauer, Clarksville, Ind. Unassigned. Application Oct. 17, 1950. 4 Claims.

2,647,620. TYPOGRAPHICAL COMPOSING MACHINE. The invention is applicable to a typographical composing machine of the type equipped with a matrix feeler movable across the discharge end of the magazine in the absence of protruding matrices. An assembling mechanism is mounted on a hinged frame for movement from and to its operative position. A lock holds the frame in the operative position on a normally active safety device which prevents the release of the lock. The safety device is deactivated by the movement of the matrix feeler across the discharge end of the magazine. Invented by Paul Hilpman, Garden City, and William J. Bahm, Brooklyn, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application Mar. 9, 1951. 10 Claims.

2,648,426. ATTACHMENT FOR LINE CASTING MACHINES. Attachment is provided for casting machines such as Linotype and Intertype machines. The attachment has a novel backing element for the movable jaw of the machine. The action of the backing means is automatically controlled to eliminate forcing of a "tight" line; for example, an assembled line of matrices and spacebands which may exceed in length the maximum line length for which the machine has been set. This permits free insertion of such an over-length line into proper alignment with the mold. Invented by Joseph F. Hazzard and Gene R. Brusseau, Minneapolis, Minn. Unassigned. Application Aug. 2, 1950. 9 Claims.

2,649,036. PHOTOCOMPOSING MECHANISM. The device is adapted for preparing copy with large size type where proper spacing is necessary. A box-like cabinet contains an exposure station and a pivotable flanged turntable bearing. A disk having a circular array of character indicia is adapted to be placed on the turntable portion of the bearing. A feed sprocket advances a photo-sensitive strip past the exposure station which is in light projection alignment with the indicia. Means are provided to control the spacings of the images upon the strip through the depths of stop slots in the disk or through the control of the coupling between the driven mechanism for the strip and the driving mechanism thereof. Invented by Robert W. Wirtz, Peoria, Ill. Assigned to Wirtz Co., Peoria, Ill. Application Dec. 1, 1950. 6 Claims.

Feeding, Folding, Delivery:

2,647,462. SHEET STRIPPING MEANS FOR PRINTING PRESSES. Pressure roll means are provided for frictionally engaging a sheet from a platen of a printing cylinder. The pressure roll means have a follower for engaging suitable form roll cam means associated with the press to engage the pressure roll means with the sheet on the printing cyinder at the appropriate time in the cycle of operation of the press. Resilient means are provided in the press for mounting of the follower so that the press may be used in the printing of sheets of varying thicknesses without adjustment of the pressure roll means on the follower. Invented by Edward F. Dell, Chicago. Assigned by mesne assignments to Davidson Corp., a corporation of Ill. Application Apr. 29, 1949. 2 Claims.

2,649,953. SWITCHING TYPE CONVEYER. A conveyer system is provided for newspapers and other articles, and is a modification of patent No. 2,563,242. The present

invention provides a conveyer system for transferring a single paper stream, selectively, to either of two separate conveyers. For example, to convey paper from a single folder to either of two separate delivery tables. Invented by Kenneth H. Hansen, White Plains, N. Y. Assigned to Cutler-Hammer, Inc., Milwaukee, Wis. Application Mar. 13, 1947. 13 Claims.

Printing Inks:

2,649,381. STABILIZED STENCIL INK. A stencil ink is provided which comprises the following products in the indicated ratios: 2 gal. of asphaltum, 5 to 10 gal. of gloss oil, carbon black pigment, and soybean lecithin in the ratio of 5% of the weight of the carbon black. A carrier is employed in an amount great enough to provide a paste. The carrier is a petroleum distillate having a distillation range of 363 deg. to 613 deg. F. and a flash of 166 deg. F. Invented by Herbert W. Hempel, Belleville, Ill. and Flavian P. Calabrese, St. Louis, Mo. Assigned to the Marsh Stencil Machine Co., Belleville, Ill. Application Aug. 6, 1949. 3 Claims.

Platemaking:

2,649,373. PAPER PRINTING FOILS FOR LITHOGRAPHIC PURPOSES AND A PROCESS OF PREPARING THEM. The process makes it possible to use diazo compounds for printing foils or plates on a paper base, which may be a rosin-sized paper, without the use of a colloid capable of hardening under exposure. The paper is coated with a light sensitive layer comprising mineral filler and adhesive, a surface of which is uniform and has planographic printing properties with a diazo sulfonate, obtained by reaction of a sulfite upon an aldehyde condensate of a paradiazonium salt of a diphenylamine in an aqueous medium which is free from coupling compounds and colloidal substances. After drying the paper, an oleophilic image is formed, the unexposed parts are washed, and greasy ink and an aqueous liquid are applied. Invented by Wilhelm Neugebauer, Wiesbaden-Biebrich, Jakob Barthenheier, Eddersheim (Main), and August Rebenstock, Wiesbaden-Biebrich, Germany. Assigned to S. D. Warren Co., Westbrook, Me. Application Oct. 18, 1948. 10 Claims.

2,647,284. METHOD OF CURVING A FLAT MOLDED PLASTIC PRINTING PLATE to fit the cylinder of a rotary printing press is disclosed. The back of the molded sheet is heated to render it flexible and the face of the sheet is simultaneously cooled. The back of the sheet is placed against the surface of a bending roll. The face of the sheet is subjected to fluid pressure to curve and harden it. Invented by Henry M. Richardson, Springfield, Mass., and William Baumrucker, Jr., Stamford, Conn. Assigned to News Syndicate Co., Inc., New York, N. Y. Application Feb. 25, 1949. 2 Claims.

2,647,864. ETCHING PROCESS. Method is provided of making photoengraved plates. A resist image is formed on a copper-plated zinc plate. The copper is removed under the non-resistant portions of the plate. The exposed portions are etched to produce a relief image by an air blast etch with a solution of copper sulfate containing nitric acid, suspended clay, and a wetting agent. Copper is deposited from the etching solution and adheres to the edges of the etched pits and protects them from undercutting. Invented by Daniel L. Goffredo, Easton, Pa. Unassigned. Application May 29, 1952. 5 Claims.

2,648,420. UNLOADER FOR WICKET-TYPE CONVEYERS. Apparatus is provided which is suitable for use in connection with the drying of lithographic plates. It includes an endless conveyer, the courses of which are located one above the other. Wicket-type rack members are arranged on the conveyer in spaced relation for supporting the plates on edge. Provided at the work discharging end of the conveyer and arranged in tandem therewith are a plurality of endless belts to receive and carry away the plates deposited thereon. A pair of pushers engage each plate deposited on the belts and impart a velocity thereto equal in magnitude and velocity at which the belts are travelling. Invented by William L. Best, Detroit, and Charles H. Lisch, Jr., Grosse Pointe Woods, Mich. Assigned to Young Brothers Co., Detroit, Mich. Application Nov. 26, 1949. 14 Claims.

Printing Presses and Equipment:

2,647,464. ELECTROGRAPHY. An electric method of reproducing printed copy comprises placing the copy to be reproduced in contact with the dielectric layer of an electrographic plate. The plate comprises a conductive backing plate with a dielectric coating layer. The assembly is subjected to an electrostatic discharge. The original copy is removed from the electrostatic plate. The plate is contacted with an electrically charged powder. The powder image so formed is transferred to a second surface and fixed to the surface. Invented by James P. Ebert, Columbus, O. Assigned to Battelle Development Corp., Columbus, O. Application Oct. 26, 1949. 21 Claims.

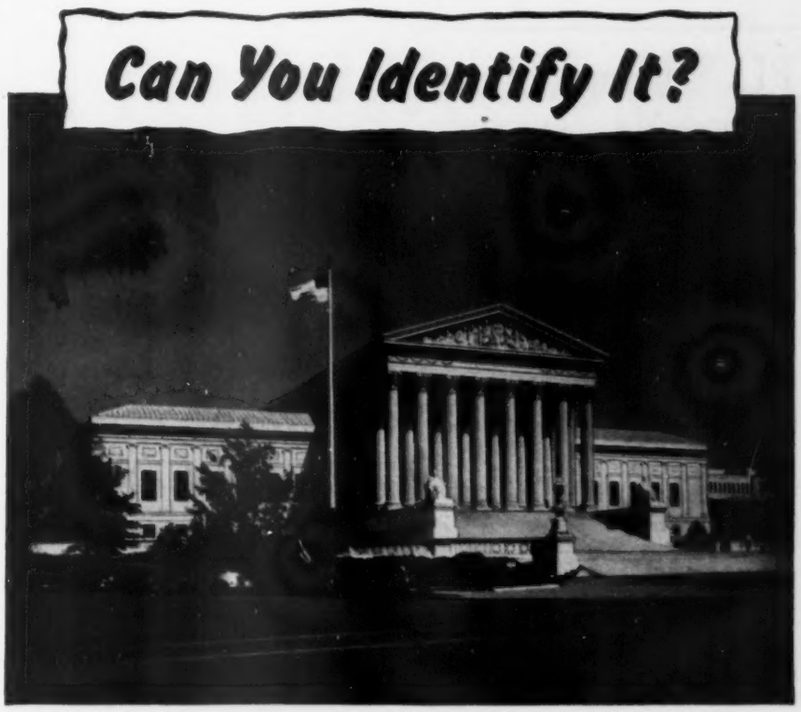
2,648,281. A LINKAGE is provided between the platen and the frame of a press such that the rotational and rectilinear movements of the platen are related to the movements of the members of the linkage. The transition from the composite kind of motion to the translated motion takes place when the moving platen has reached a given position with respect to the bed of the machine. The composite motion of the platen, before the transition point, will be combined rolling and sliding motion on a plane bed plate, the rotational component diminishing to zero at the transition point. The members comprising the linkage provide control by surface contact rather than by line contact. Invented by Flavius Kingsford Daniels, London, Eng. Assigned to Vickers-Armstrong, Ltd., London, Eng. Application Mar. 4, 1949, in Great Britain Mar. 4, 1948. 5 Claims.

2,648,466. DRY POWDER CONDITIONING AND DISPENSING MEANS. Device is provided for conditioning and dispensing dry powder in a cloud for use upon printed sheets in printing as the sheets move toward stacking for preventing offset of ink, colors, and the like. The device comprises a chamber made of transparent material for holding the powder. Air is projected into the powder to form a homogeneous fluidal and aerated mass of fine particles and air in desired proportions. Means are provided to effect a wide range of application over the printed sheets. Evenness of density is maintained during application of the powder. Invented by John W. Baur, Glen View, and Otto G. Plos, Cicero, Ill. Assigned to Binks Mfg. Co., Chicago. Application Mar. 18, 1949. 15 Claims.

2,649,649. DAMPENING ROLL FOR LITHOGRAPHIC PRESSES. Rolls are provided for dampening printing surfaces of lithographic presses. The roller has a seamless terry cloth cover on it. The cover has a body of closely knitted fabric and a napped outer surface formed of napped loops interknitted with the loops of the body. The nap is evenly distributed throughout the circumference of the cover to provide a surface adapted to contain water and evenly moisten the surface contacted during a printing operation. Invented by Harry H. Colehower, Jr., Abington, Pa. Assigned to C. Walker Jones Co., Philadelphia. Application Dec. 29, 1948. 2 Claims.

2,649,734. ROTARY MULTICOLOR TRANSFER PRINTING MACHINE. This printing machine is of the in-line type which is generally used in letterpress printing. A paper web runs from a roll through three printing units to a folding apparatus. Each printing unit has two plate cylinders, two transfer cylinders, and an impression cylinder. Inkers and dampeners are disposed below the level of the plate-cylinder centers. The cylinders and inkers are driven from a central gear box via bevel wheels and shafts. All of the inker-driving elements are disposed in the wall and run in an oil bath. Invented by Max Ras, Zurich, Switzerland. Unassigned. Application Sept. 18, 1950, in Switzerland Oct. 10, 1949. 1 Claim.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Munsey Bldg., Washington, D.C.



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Aids to Increased Production formed an important session of the PIA Convention program in Washington, D. C., Hotel Shoreham, Oct. 5-7. Participants in the panel-type meeting are shown above, from left to right, as follows: Thomas Kimen, R. R. Donnelley & Sons Co., Chicago; Mortimer S. Sendor, Sendor Bindery, New York, N. Y.; Norman C. Bridwell, Jones Graphic Products, Toledo, O.; Moderator Samuel F. Chernoble, The Comet Press, New York, N. Y.; Sol M. Cantor, The Composing Room, Inc., New York, N. Y.; and Olin Freedman, Management Engineer, Chicago.

PIA Theme: Good Management

(Continued from Page 41)

non-productive time to a minimum; (3) Defer unnecessary maintenance and repair expenses. However, there should always be adequate preventive maintenance; (4) Reduce the supplies expense to the minimum; (5) Reduce waste; (6) Equipment speeds should be studied to see if they can be stepped up; (7) Eliminate clerical overtime, reduce clerical employees, reduce office supply expense, examine travel and donation expense.

Aids Designed for Increased Plant Output

DISSATISFACTION with conventional ways and means has forced development of new and improved equipment, materials and processes in the printing industry, said Samuel F. Chernoble, moderator of a panel discussion devoted to *Aids To Increased Production.* Held as part of Printing Industry of America's convention in Washington, D. C., the session heard reports on recent improvements in the printing plant. Chernoble, who is President of The Comet Press, New York, N. Y., remarked that the inventions now being used in the Graphic Arts were fostered by people who were not convinced that the tried and true was the best way to do a job.

He said the most significant difference between a girl soldering delicate connections on a television assembly line and the printer is that the girl has been given every technical assistance available, "while too many of us still struggle along in the ruts made by our forefathers."

Industry Resists Improvements

Charging that the industry for years has resisted new ways and means, Mr. Chernoble asked the commercial printing executives if they were now using such improvements as thermoplastic mounted cuts, photo-composition, V-belt drives, pH meters, pre-sensitized plates, etc. He added that this progress is proof the Graphic Arts does not lack for technical facilities and improved techniques. He concluded with an appeal for the industry to "accelerate abandonment of outmoded methods."

Composing Machine Aids

The first panel member, Sol M. Cantor, spoke on *Auxiliary Equipment and Techniques in the Composing Room.* Cantor is President of The Composing Room, New York, N .Y. He is responsible for the introduction of several developments for linecasting machines which he described and exhibited in his talk, and are available from Fisk Industries.

Cantor first explained the use of the Align-A-Mat, a device for restoring alignment and eliminating distributor stops due to worn lugs on Intertype and Linotype matrices. The Clean-A-Mat, he said, is used to help eliminate hairlines on Intertype, Linotype and Ludlow slugs. Both devices were described in the April 1952 issue of *Printing Equipment Engineer.*

He also described the Align-A-Drill, a positive jig for drilling out broken screws in a Linotype crucible when removing the mouthpiece. A mold disk retaining plate multiple shim, shown by the speaker, eliminates end play in the Linotype mold disk hub bearing and provides better type high control. These were described in the June 1953 issue of *Printing Equipment Engineer.*

Mr. Cantor explained the installation of a specially designed scraper on the mold disk of linecasting machines. The device is used for removing excess sprues from the back of the mold disk due to more open vent slots in the pot mouthpiece.

Resurfaces Rollers For Repro Proofing

In his address before the PIA Plant Output Clinic, Washington, D. C., Sol Cantor mentioned that the surface of synthetic proof press rollers becomes slick after a time. This prevents taking good repro and transparency proofs. The slick surface is removed by a simple method. A piece of wood lockup furniture is wrapped with abrasive cloth. The rollers are dipped one at a time in a pail of kerosene and rubbed with the abrasive block. This restores the dull ink-taking and distributing surface.

Discusses Offset Plates

Norman C. Bridwell of Jones Graphic Products, Toledo, O., reported on recent developments in the offset platemaking field. In the first part of his talk, he traced the growth of offset printing and said the grained-surface plate and the deep-etch plates are the two offset plates used mostly in producing the nation's offset printing.

Bridwell discussed a number of different types of offset plates. He said dry offset printing is not a substitute for either offset or letterpress. He thought it was too early to say where this process will fit in its entirety into the Graphic Arts picture. Thin gauge magnesium, he added, has been helpful in its rapid development. The plate lends itself well to photocomposing operations.

Letterpress Demands Accuracy, Too

Significant trends and possibilities in pressroom equipment and techniques was next described by Olin E. Freedman, Management Engineer, Chicago. On the subject of letterpress presses, Freedman said the press can be operated at maxi-

Pressman's Ink Manual

BY GEORGE M. HALPERN

PROBLEMS related to and caused by inks are covered in this 182 page reference guide for pressmen and beginners. Topics include: Relationship of ink to stock; common ink problems, their causes and remedies; where and when to use special inks; latest developments in printing inks; how to prepare and use an ink log; procedure for process printing; handy reference charts for mixing and matching colors, estimating inks, determining proper screen to use, and many others.

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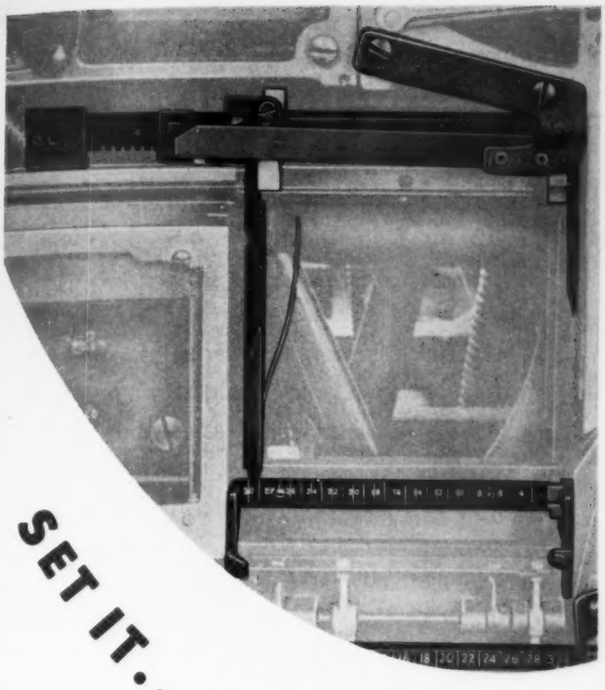

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mum efficiency only when standards of accuracy comparable to those employed by competing processes are adopted and enforced.

He said: "Precision practice in letterpress, once considered by much of the industry as something for the theorists or, at best, for only the largest establishments, has now proved itself most convincingly in successful plants of all sizes." He named patent bases and pre-made-ready electrotypes as among the important advances in the letterpress field.

Freedman also credited sheet-fed multicolor rotary letterpresses, plastic and rubber plates, magnesium engravings, photocomposition, heat-set and vapor-set inks and improved anti-offset sprays and static neutralizing equipment as responsible contributions to furthering letterpress printing.

Trend Toward Web Presses

The speaker said there is a trend today from sheet-fed to web presses. According to Freedman, the web press is finding its place in many small and medium size plants for producing national publications, large runs of mail order catalogs, etc. In letterpress, he said, web presses are being used to run forms which were previously considered too small and for runs formerly thought too short for such equipment. He added that numerous well standardized types of work, such as timetables, are leaving sheet-fed letterpress or offset for letterpress and offset web presses.

Continuing his statement that the trend is toward web printing, Freedman said: "Regarding the matter of quality, it must be recognized that a web is under uniform tension during all stages of printing, as compared with the gripping and re-gripping of sheets along one edge only. Stock has little chance to go out of register between colors, which are applied at split-second intervals; and both automatic and manual compensation may be applied to correct minute variations. The line of contact between the plate and impression cylinders is narrow, requiring less pressure and yielding sharper results. This is true of both letterpress and offset web presses, since no gap for gripper mechanisms in impression cylinders is required.

"Static neutralizers may be installed with ease. Offsetting and smudging are virtually non-existent because of the drying means with which all web presses may be equipped. Ovens for heat-set inks actually boil off the solvents of letterpress and lithographic inks formulated for such treatment while the web is subjected momentarily to extremely high temperatures, and the solvents are exhausted as fumes. Webs bearing vapor-set inks (at present for letterpress only) are readily dried by passage through chambers charged with atomized water or low-pressure steam. The solvents of gravure and flexographic inks, being highly volatile, are completely evaporated when the web is conveyed through a hood or tunnel within which warm, turbulent air is first introduced and then withdrawn together with the vaporized solvent."

Bindery Cutting Equipment

A report on recent production aids for the bindery was delivered by Mortimer S. Sendor, Partner, Sendor Bindery, Inc., New York, N. Y. Part of his talk was devoted to cutting equipment in which he said: "A printer operating his own bindery should have a cutter that can square his largest press sheet. A trade binder needs a cutter which will cut the longest way of the sheet of the steady customer with the largest press."

He remarked that changing of knives can be kept to a minimum by carefully planning the day's cutting and leaving the cardboard, kraft paper and other knife dulling paper to be cut after the knife has seen several hours of wear. He added: "It is not enough to pour thousands of dollars into good cutting equipment without having the necessary auxiliary pieces for bringing up the work, taking it away and packing it."

Strong Backs Replaced By Material Handling Devices

Other parts of Sendor's talk concerned improved folding machines, stitchers, bookbinding machines and binding techniques. On the subject of material handling, he said: "The strong back of unskilled labor is being replaced by conveyors, lift trucks and other material handling devices."

In his conclusion, Mr. Sendor remarked: "We must assume our obligation of selecting the right equipment and processes that satisfy our needs and the needs of our customers. Either extreme, too much or too little, can be harmful. Furthermore, a machine cannot be built that can take every consideration into account."

The last speaker on the program, Thomas W. Kimen of R. R. Donnelley & Sons Co., Chicago, dealt with methods of improving productivity in the office. Kimen's talk included discussion of payroll preparation, purchasing, receiving and accounts payable activities, billing, accounting distribution and record keeping.

Improving Management Techniques

HIGH GRADE reviews of recent management books were presented by five highly regarded Graphic Arts management and engineering executives at the Improving Management Techniques session, Printing Industry of America convention. The session was held on Wednesday, October 7, at Hotel Shoreham, Washington, D. C. Discussions about the books by the respective speakers were presented in interesting manner. Kenneth F. Morse, President, Standard Register Co., Dayton, O., presided and introduced the speakers.

The first speaker was Donald E. Sommer, PIA Technical Director who discussed two PIA books — *PIA Estimating Manual and PIA Production PAR*. Sommer explained what is to be found in the *PIA Estimating Manual*. Further, in order to explain the simple way in which needed information could be obtained quickly, he displayed an automobile map of the State of Ohio on the screen. When one first looks at such a map he is somewhat puzzled because of the myriad figures, symbols, names of cities and towns, and such. Now, in order to use such a map, one must find out where he is, where he wants to go and how to get there. He then compared the complicated looking tables to be found in these PIA books with the road maps which are used regularly by everybody.

After explaining that the figures to be found in the Manual and the standards established in your plant, as recorded in PAR, must not be used for pricing, he said that estimating has to do with material, labor and operating costs, while pricing has to do with selling, marketing and merchandising. His conclusion was that management in the printing industry must improve in order to better the 3.75% net average for the industry as a whole as shown by the 1952-1953 PIA Ratio Studies.

"Sin in the Shop"

Prof. Robert H. Roy, Dean, School of Engineering, Johns Hopkins University, Baltimore, discussed his new book, *Management of Printing Production*. Facetiously, he said the book should be titled *Sin in the Shop*. He explained that the dominant underlying objective in writing the book has been to develop sound principles of production management and most emphatically not to present a set of rules on "how to do it." His is not a cook book nor a hand book. It contains no formulae the application of which will insure sound production management. Every production manager must work out his own salvation from the context in the book. For instance, he said, it does not matter whether you employ 10 men or 10,000, you cannot make an accurate delivery commitment without taking into account the functions of production management . . . A big printer may weigh the relative desirability of flatbed or rotary press for printing a big job. Coincidentally his small neighbor may be debating whether to run one-up on the jobber or two-up on the Kelly. Each is engaged in exactly the same problem.

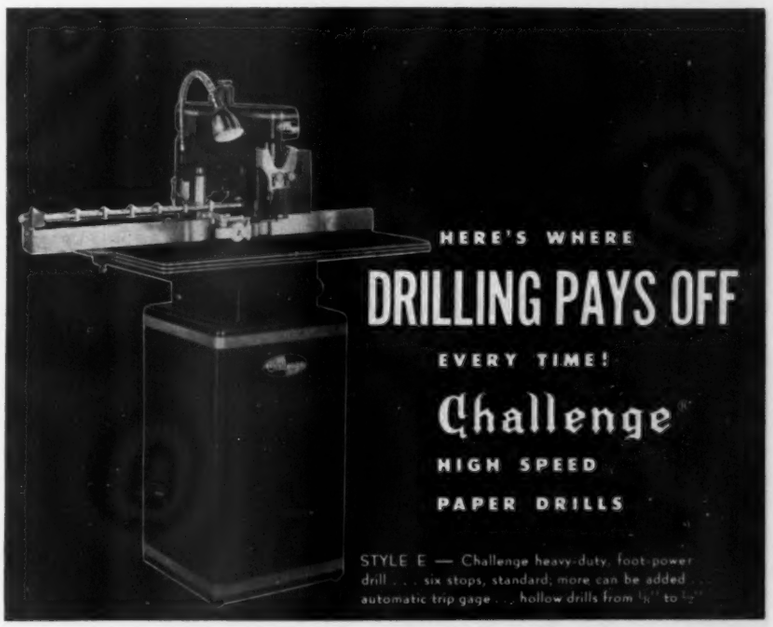
During his address, Professor Roy said that "The daily activities of a plant are always dynamic, never static . . . A composing room is said to have 1000 galley slides, a stock room is capable of storing 50 skids. The real question is not how many skids the stockroom can hold, but how many it can handle as a balancing reservoir between raw materials receipts and pressroom consumption." He also discussed other parts of the book which deal with supporting activities, personnel management, and industrial engineering.

Gage Appraises PIA Composition Manual

Management Consultant Harry L. Gage, Gloucester, Mass., discussed the new book, *PIA Composition Manual*. The manual is useful to the three major branches of the industry—letterpress, offset and gravure. Today, the compositor no longer is the sole practitioner of type arrangement. Many creative and technical workers make decisions affecting type arrangement. Too often they have only a smattering of type knowledge and are ignorant of composing room procedures that control economical production.

"While this manual becomes a highly effective medium for the direct vocational training of compositors, it is equally valuable to the author, copywriter, salesman, account executive, estimator, production executive, layout man, art director, illustrator or plant executive or technician in any department for any process—or just the boss himself."

"Developments of the present time are set forth," said Gage, "both in the fields covered by typewriter mechanisms for cold type composition and by the various applications of camera devices to provide keyboard-composed phototypesetting."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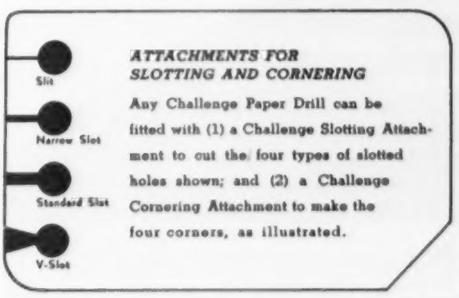

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Throughout the book frequent mention is made of the general uses of typesetting machines and of the handling of their products. The book is divided into three parts with some 296 photographs, diagrams and specimens of type faces and typography. The fourth part of the book deals with machines in the composing room and their relationship to the practices previously explained in terms of hand-set type.

Braun Discusses Ratio Studies

Harold W. Braun, Vice Pres., Fetter Printing Co., Louisville, Ky., discussed *Ratio Studies*. He handled what is considered by many to be a dry topic in interesting manner. In the year ahead many printers will be faced with a serious problem. There will be the plant with steadily increasing sales but with expenses increasing faster than sales. Second, there will be the plant with current sales and profits at a satisfactory level, but with a breakeven point so high that even a modest dip in sales volume or a competitive softening of prices quickly washes out the usual profit and substitutes red ink for black . . . He asked: "The big question is: Where are your expenses out of line, and why?" In answering the question, he said one of the best ways to answer this question is to use the *PIA Ratios* as a starting point. It will show you where to look for the best ways to cut your expenses or hold them to a minimum. The *PIA Ratios*, he said, provide a yardstick by which you can measure your own efficiency. Through asking a series of questions with regard to comparison of your own plant with others, Braun illustrated the utility of *PIA Ratios*. Any likely question regarding efficiency of plant management can be found in the volume.

Printing Equipment Catalog

Available to the Graphic Arts industry is a new catalog on printing machinery and supplies published by Western Newspaper Union and its Divisions, the E. C. Palmer & Co. and Harry

W. Brintnall Co. According to Farwell W. Perry, President of Western Newspaper Union, the catalog contains illustrations and descriptions of equipment and supplies for printers, compositors, publishers, binders, typesetters, stereotypers and electrotypers. The contents are cased in a hard binding. The cover of the catalog is shown in the accompanying illustration. A copy may be obtained by mentioning PEE No. 790 in your request.

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Roto Inks — III

(Continued from Page 44)

it was the practice of most printers to employ a proving ink (understood to be slow drying) with a slow solvent, such as V.M.&P. naphtha and/or xylol. Today, it has been found possible to employ high speed inks when thinned with slow solvents, just mentioned. Whatever ink or solvent is employed, it is necessary to have the proving ink mixture slow enough in drying speed so as not to dry-in in even the most shallow cells. A corollary to the proper drying speed of a proving ink is this: The drying equipment of the proving press should be adequate, especially in four color or process proving.

Selection of Thinner for Production Press

It is understandable that high speed printing, say from 900 to 1100 ft. of paper per min., requires a faster evaporating solvent in an ink than does low speed printing, say from 300 to 600 ft. per min. Therefore, at the higher speeds, the printer makes use of those hydrocarbons which have relatively high volatility, such

as textile spirits, lactol spirits, or toluol, and at the lower speeds, V.M.&P. naphtha or xylol are employed. Just which solvent is to be used at a given speed is also a function of the depth of etching. For example, let us suppose that in printing a given four color signature, the cells in the yellow cylinder are deep, and are printing a lot of solids. Such an ink should be thinned with a slightly faster solvent, say textile spirits. This is because it is well known that a thick ink film is more difficult to dry, *i.e.*, the solvent evaporates slower from a thick ink film than it does from a thin ink film. If, in producing this same signature, the cells, say in the blue cylinder, are predominantly shallow, than a slower solvent, such as lactol spirits, plus a small quantity of V.M.&P. naphtha, should be used, because shallow cells dry in more rapidly between the doctor blade and point of impression than do deep cells. Since cylinders used in making publication signatures vary a lot in depth, one must use that thinner which will favor that part of the cylinder which is most critical, either from the point of view of the advertiser or the editor. In the final analysis, only a general rule can be laid as to thinner selection, for other considerations must also be taken into account, as just mentioned.

(*To Be Continued*)

ABC of Offset

(**Continued from Page 42**)

important however that the operator have a sound knowledge of screen angles so that no moiré pattern will result when a mechanical tint is applied.

Staging

Staging continuous tone or halftone negatives or positives is generally a required operation in corrective procedures. Its prime purpose is to protect certain areas while processing others.

The two major and most important phases of this operation are staging for clean, sharp and well defined lines and details, and secondly, staging for blending and softening boundaries and edges of the desired image areas.

This operation of staging has a twofold purpose: First, to provide a resist or protective coating on the emulsion so that unprotected areas may be acted upon by chemical solutions; secondly, in preparation of the negative or positive for the application of dye stains and airbrushed water color pigments to certain areas of the image.

Staging Materials

Each of the several available staging materials must possess three or more of the following features: (1.) Ease of application; (2.) Ability to *stay put* after application; (3.) Multi-purpose, *i.e.*, act as an opaque in addition to its protective properties; (4.) Ease of removal from the emulsion when required, and (5.) Transparent substance which protects without need for removal after its prime purpose has been served.

The foregoing list is an indication of the different kinds and types of staging materials, some of which are listed as follows:

Dry—Graphite, powdered and pencil (lubricant, multipurpose).

Wax—Paraffine, beeswax (water repelland, lubricant).

Grease—Petrolatum, vaseline (water repellant, lubricant).

Oil—Castor oil, heavy grade lubricant oil (water repellant).

Lacquer—Duco, pyroxyline, vynil (transparent, water repellant).

Varnish—Resinous, asphaltum, tars (water repellant).

Paint—Japan ground lamp black (opaque, water repellant).

Compound—Liquid tusche, litho crayon is both water soluble and water repellant (dual purpose).

Powders—Graphite, lampblack, aluminum and copper bronzing powders, lycopodium (water repellant supplements).

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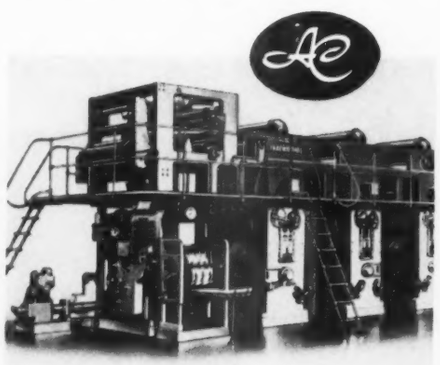
2 **Sheet Fed Palatia:** plate or continuous-surface-sleeve, high-speed models with patented pre-gripper register device and other exclusive features. Unequalled for single and multi-color reproduction. Sheet sizes 22 x 30 to 41 x 55.

3 **Sheet Fed Palatia Automat:** a compact one-man press for sheet sizes up to 19 x 26 inches. Also for multi-color proofing.



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Each of these and many others possess individual advantages and disadvantages in the trade. Some are easily applied, but do not afford guaranteed protection under adverse conditions. Others are more difficult to apply and offer a minimum of protection due to their lack of tenacity. Some dry too rapidly while others never dry or harden and tend to smear during processing operations.

The majority of staging preparations are surface drying in nature. Because of this action, few of them offer perfect protection. Cold water or chemical solutions tend to congeal the coatings, and when the supposedly protected emulsion becomes sufficiently moist via capillary attraction, the protective coating separates from the emulsion surface and floats away. This means that the ideal coating must be absorbed, must adhere tenaciously to the gelatin emulsion and must dry rapidly. It must provide a smooth, even coat without being brittle or tacky to the touch.

The ideal coating must retain its protective properties whether applied by brush, or when thinned to such a degree that it may be applied by an air brush. The drying speed must be such as to enable the feathering or blending of soft edges before full setting and drying can take place. It must also be elastic enough to withstand excessive expansion or contraction during processing operations.

In 1949 the following formula was released to the trade and is most nearly an ideal staging solution:

Liquid Asphaltum	2 oz.
Mogo Varnish[1]	¼ oz.
Lubricating Oil	⅛ oz.
Spirits Turpentine	Sufficient

Mogo Varnish[1] adds tack and tenacity to the otherwise brittle asphaltum, while the lubricating oil renders the asphaltum more elastic while at the same time causing the gelatine emulsion upon which it is applied to be more water resistant. The turpentine aids in the penetration of the coating as well as in the oxidation and fast surface drying of the protective varnish.

By the nature of this mixture, it is possible to let the coating remain on the negative or the positive for any indefinite period of time, without affecting its ease of removal with Benzol, S&R Solvent[2] or similar cleaning agents.

When properly compounded and of the correct consistency and flow, this varnish has never failed to protect thoroughly the negative or positive film or glass upon which it is applied.

This formula is now standard in many shops throughout the United States, Canada, South America, Europe and Asia and under the many different circumstances and conditions of shops and climates, has proven to be more effective than other commonly used solutions.

[1] Mogo Varnish is a product of The International Printing Ink Co.

[2] S&R Solvent is a product of the Standard Oil Co. of Ohio.

Paper Masks

It is frequently desirable to make corrections with either graphite powder or air brush, but staging with any of the foregoing listed solutions is impractical. The use of frisket paper can be resorted to, but since most of the stencil cutting is accomplished after the paper has been affixed as in photo retouching, this is impractical because of possible damage to the photographic emulsion.

The better way is to use varying sized strips of masking tape to protect the finer details and then mask out the larger areas with blank paper.

In some instances a close line tracing is made of the image area to be corrected on a piece of tracing paper or other suitable stock. The stencil is then cut with a razor blade or stripping knife. Afterwards the mask is applied to the negative or positive in preparation for the retouching operation.

Paper masks will serve equally well when a mechanical shading machine screen is to be used on a halftone negative or positive. It is easily removed after the work has been accomplished and there is no need to re-wash the plate or film to remove any protective coating such as gum arabic, gamboge or other medium used for the purpose.

(To Be Continued)

A. R. Tommasini

It is an unwritten custom of the International Association of Printing House Craftsmen that if a man is good enough to be elected to the Third Vice Presidency he is of high enough calibre to be advanced successively to the Second and First Vice Presidencies, eventually to function as President. Thus it happened that Amadeo R. Tommasini was unanimously selected Third Vice President at the recent Dallas (Tex.) convention.

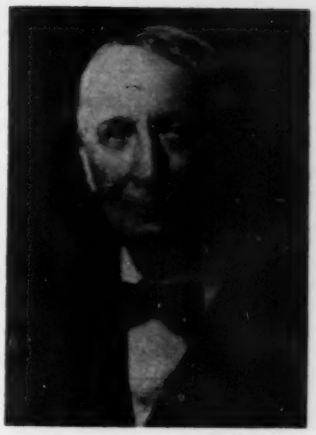
Tommasini is Plant Manager for the University of California Press (Berkeley). He's a Past President of the San Francisco Craftsmen's Club. For the past several years he has been Chairman of the International's Public Relations Commission.

A. R. TOMMASINI

He is a typographic designer of note and has won many national typographic awards. He has lectured to Graphic Arts groups from time to time. He is rated an authority on printing production, plant management, layout, design and typography.

J. F. Webendorfer

For at least two generations the name Webendorfer has been constantly before people in the Graphic Arts industry. It has been identified with letterpress, offset and gravure printing presses. The presses engineered by Webendorfer are used in producing special business forms, magazines, newspapers, booklets, checks and bank books. The name is also associated with printing collators, carbon processors and other engineered equipment for the printing industry. J. F. Webendorfer is an inventor, engineer and successful business man. When he first started to learn the machinist's trade he put his inventive mind to work on many kinds of mechanical problems. He is credited with having a major role in the development of rotogravure printing in the United States. After he felt his work in the gravure field had served its purpose, he turned in 1928 to the offset field. At this time he disposed of his rotogravure interests to what is now the Harris-Seybold Co. He set to work to develop high speed offset presses for commercial printers. A little later, due to a challenge, he developed the Webendorfer web-fed offset press which would print in color both sides of the paper simultaneously, and cut and fold in one operation, as many as 12 thousand fliers per hr. In 1938, Webendorfer and Thos. Roy Jones of American Type Founders



J. F. WEBENDORFER

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Duraplate
THE NEW PHOTOENGRAVING ZINC

- A fine-grained zinc alloy • Etches fast
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- Durable: Especially indicated for
  . . . Extra long press runs . . . Heavy mat production
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We want you to try DURAPLATE for your own work—to prove to your own satisfaction that this new photoengraving zinc meets every claim we make for it.

DURAPLATE is unconditionally guaranteed to meet your satisfaction. Order a case today.

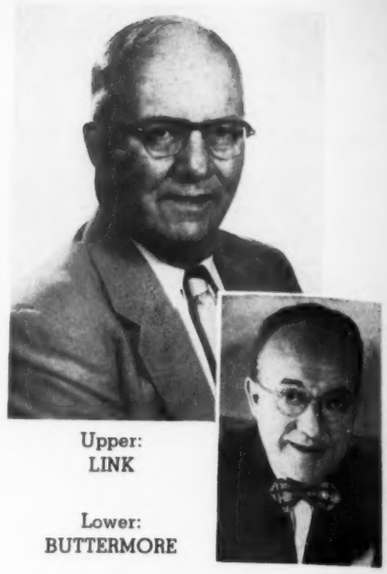
Imperial TYPE METAL COMPANY
SERVING THE GRAPHIC ARTS Exclusively
Engraved on Imperial Zinc
PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

joined forces. The Webendorfer operation became a division of ATF. Last year, construction was started on a new plant in Mt. Vernon, N. Y. Its 112,500 sq. ft. floor space is being occupied this month.

It is related that when Webendorfer received his $1 million share of the ATF deal, instead of stashing the entire amount for his own future enjoyment, he cut a melon of a quarter million with his faithful employees. During the depression in the 1930's, his company continued business without a single layoff. He is credited with the ability to create and direct employee team play.

Leon A. Link and C. L. Buttermore

During the latter part of August, Leon A. Link was named Production Mgr. of the Forest City Pub. Co., Cleveland, by General Mgr. Sterling E. Graham. Link has been Production Mgr. of the *Plain Dealer* since 1938. He will now supervise operations both at the *Plain Dealer* and the *News*. He was one of the first to espouse a cost system for newspaper mechanical operation. He is in charge o current building expansion program for the Forest City Pub. Co.



Upper: LINK

Lower: BUTTERMORE

Charles L. Buttermore who has been Mechanical Supt. of the Cleveland *News*, is now functioning in like capacity for the *Plain Dealer* and *News*. Announcement of Buttermore's promotion was made by Mr. Graham coincidental with that of Link. Buttermore started with the *News* as an editorial office boy at the former Cleveland *Leader* at $5 per week. At the *News* he has been a printer, day foreman, composing room superintendent, assistant mechanical superintendent, and since 1947 he has been mechanical superintendent of the *News*.

Richard E. Lewis

Recently given responsibility as Manager of the American Newspaper Publishers Assoc. Mechanical Dept., Richard E. Lewis has been functioning in that capacity since early in August. He succeeded Vernon R. Spitaleri who held the post for a number of years before becoming associated with Knight Newspapers last June. Dick Lewis was graduated from

RICHARD E. LEWIS

Saving ON SHAVING!

Dollar for dollar the new Model D Plane-O-Plate Rotary Shaver is the best value on the market today.

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ROTARY SHAVER

THE NEW Monomelt Plane-O-Plate is a precision, high speed rotary shaver for metal, wood and plastic. Its amazingly low cost and high work output makes it ideal for newspapers, photo-engravers, stereotypers and plastic plate makers.

The new Plane-O-Plate is rugged and dependable. Cutter head is molybdenum steel mounted in Timken bearings. The body is made of stress-relieved welded steel, heavily reinforced. Substantial cuts are made without vibration or chatter. The Plane-O-Plate will shave a full page plate, a single small plate or a bed full of small plates at one time. Shaving capacity is from .150″ to 1″ . . . to .055″ with auxiliary plate, available at a small extra charge. Safety features protect operator, plates and machine.

Plane-O-Plates are still available. See your dealer, or wire, write or phone for folder of complete information.

THE MONOMELT CO., Inc.

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Ohio State University in 1949 with a degree in Mechanical Engineering. He is a qualified journeyman toolmaker. He was a First Lieutenant in the Engineering Corps, World War II European Theatre. He came from the ANPA Research Laboratory, Easton, Pa.

William Baumrucker, jr.

Recently, William Baumrucker, jr., became associated with the Boston *Herald* and *Traveler* as Business Mgr. Previous to assuming his new duties, he had served for a number of years as Pro-

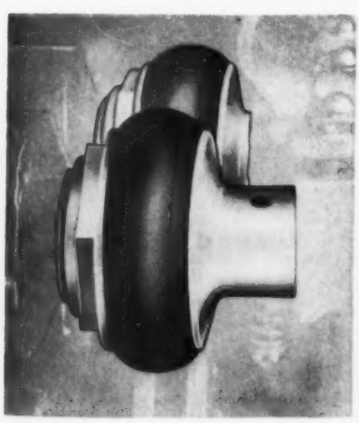
WILLIAM BAUMRUCKER, Jr.

duction Mgr. of the Washington (D.C.) *Times-Herald*, and for a time was Chairman of the ANPA Mechanical Research committee. He graduated from the Massachusetts Institute of Technology with a B.S. degree.

Equipment & Supplies

(Continued from Page 26)

Improved Roller Truck — An improved Morgan Expansion Roller Truck has been announced by Amy Williams, President, Cowan Pressroom Products, Inc. The new Model 54 truck, it is said, reduces noise, eliminates cut rollers, and insures clean printing. A new type of molded rubber extends the life of the tire, which can be adjusted to the diameter of each roller. A special wrench is furnished with each set of Trucks. Please mention PEE No. 817 when requesting further information.



Bulletins on Anchor Supplies

Anchor Chemical Co., Inc., has issued a number of bulletins describing various Anchor supplies for the printing plant. The bulletins, each of which measures 3½ in. by 6¼ in., deal with the following: Aled plastic and rubber plate wash; Anchoroil lubricating oil; Anchor type wash for removing hard, dried ink; Inkote which retards oxidation and skinning of ink in the can or fountain; Solvent No. 95 for plate and type cleaning; Non-Work-Up Fluid for preventing type work-ups in a form; and Numbering Machine Cleaner No. 909 for over-coming sticking, dragging and jumping in numbering machines. Other bulletins concern Pam-X, a cold synthetic flexible glue for snap-outs, padding, tabbing and binding; Rubber Roller Wash R228 for cleaning and revitalizing press rollers and blankets; Ronolene, an offset blanket and roller wash; and Anchor Typewash for removing dried ink. All of these bulletins may be obtained by asking for PEE No. 670 in your request.

Printing Equipment *Engineer* will be glad to help you find where it's made.

Solids they all print halftones equally well with type

TINGUE TRADE MARK PRINTING PRESS BLANKETS

Solids print black and every dot and serif reproduce faithfully, because with Tingue press packing you can regulate the overall gauge of the packing to fit the mechanical condition of your press. Tingue, Brown offers the widest range and number of press packings available today. Gauges from .012" to .120" that make up into 108 different combinations of gauges.

COMBINO—An extremely durable clean printing laminated blanket. Gauges .062", .083", .093".

TOP DRAWSHEET—is firm, durable, economical and of long life. Gauges .016", .025", .030".

CUSHION CORK*—A highly resilient underpacking. Gauges .059", to .085".

TINGUCORK*—Much firmer than "CUSHION CORK" and preferred where precision plates are available. Gauges .032", .055", to .085".

FOUNDATION—A firm, durable oilproof under packing laminated by duPont with "Neoprene". Gauges .032", .040", .053", to .085", .120".

COATED TYMPAN PAPER—The coating by The Carborundum Co. gives better register and measurable savings in down time on runs over 50,000.

Tingue Coated Felt — Uncoated Wool Felt — Gold Tympan Drawsheet—Improved Satisfaction—Sterling—Korker Under Blanket.

TINGULOK — This great new "clipper lacing" method is the simplest system for blanketing rotary newspaper presses.

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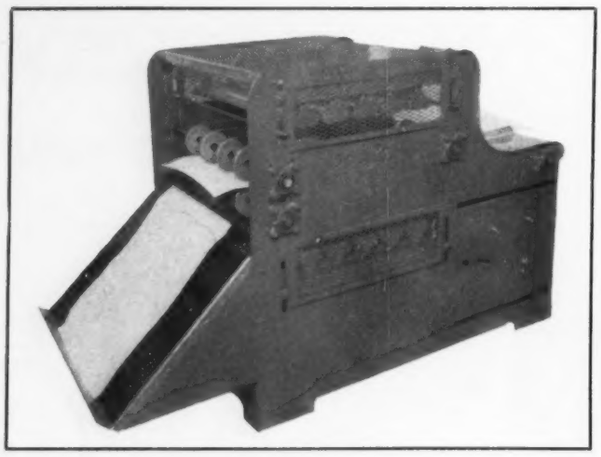

Floor space—36" x 48" x 42" High
Shipping weight 1,100 lbs.
Price $1500.00 f.o.b. Lynnfield, Mass.

AUTOMATIC INFRA-RED STEREOTYPE MATRIX PRE-TREATING MACHINE

- Escalator action
- Controlled speed of mat through machine
- Controlled timing
- Two Banks parabolic heaters and reflectors
- Reflection of ray operative at all times
- Infra-Red units controlled in fifteen second cycles
- Units slide mounted—can be raised or lowered for intense heat or modified heat

AMERICAN PUBLISHERS SUPPLY, INC.

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Gerald C. Alletag has been appointed Production and Quality Control Mgr. of the Packaged Chemicals Dept., Philip A. Hunt Co. Alletag was formerly associated with Edwal Labs and Ansco.

BOOKS

Platen Press Operation

CARNEGIE INSTITUTE of Technology has published an illustrated textbook, the title of which is *Platen Press Operation*. The book was written by George J. Mills, Asst. Prof. of Presswork in the Department of Printing Management. The book was prepared as a guide for training personnel and will be of value to presswork students and apprentices. It will serve as a reference book to pressmen who may wish to check and perhaps improve their methods. The book has been written and illustrated so it may be understood by persons having little previous knowledge of the subject. Discussed are Chandler & Price Automatic, Kluge Automatic and the 10 in. by 15 in. Original Heidelberg presses. In the text will be found a clear explanation of platen presswork, basic information for all letterpresses, fully illustrated explanations (there are 343 photographs and 79 line drawings), also discussed are New Era, Kelsey and Thomson-National presses, instructions for three automatic feeders, and (importantly) instructions for use of the magnifying glass.

Platen Press Operation — By George J. Mills. There are 150 double column pages, 8½ in. by 11 in., 18 chapters with 343 photographs and 79 line drawings. Case bound in dark buckram. Price $6 per copy. Order direct from Geo. J. Mills, Carnegie Institute of Technology, Pittsburgh 13, Pa. Make remittances payable to George J. Mills.

Milwaukee *Journal* Has New Look

A separate classified ad section, expanded news sections and increased color flexibility for both spot news and advertising are now daily features of the Milwaukee (Wis.) *Journal* with the completion of its equipment and production expansion program. The changes, which took effect on September 14, also provides the paper with improved makeup.

There are now four sections to the daily editions. Space in the daily news section formerly devoted to want ads is now given over to expanded news coverage and display advertising. It is felt the special classified ad section promotes more prominence to want ads. The main news section remains substantially the same with enlargement of sports, radio and television, business news, picture page, and amusements features.

New press equipment has included the installation of color convertible decks on each of the seven unit Hoe presses. Thi installation has increased flexibility in using editorial and advertising color in any section of the daily or Sunday editions.

On the first day of the change, the *Journal* used a full color sports picture taken less than 24 hrs. before the edition went to press. This was done to show the versatility of its new operation which includes elimination of color prints by the photographer and a full set of color plates made with a single shot of the engraver's camera.

Recent Equipment Reports

Rosback Installations

Installations of Rosback bindery equipment reported by the F. P. Rosback Co. are as follows: *Auto-Stitchers*—Van Dyck Printing Co., New Haven, Conn. (installed by American Type Founders); Craftsman Press, Washington, D. C. (installed by American Type Founders); Utilities Engineering, Chicago (installed by Type & Press of Illinois, Inc); Howell-Goodwin Printing Co., Crawfordsville, Ind. (installed by Davidson Sales & Service Agency); Acorn Offset, Inc., Franklin, Ind. (installed by Kalamazoo Printing Machinery Co.); Drake Printing Co., Shreveport, La. (installed by Western Newspaper Union); Lincoln Printing Co.,

St. Paul, Minn. (installed by Perfection Type, Inc.); Bonanza Printers, Las Vegas, Nev. (installed by American Type Founders); Ave Maria Institute, Washington, N. J. (installed by Zimmer Printers Supply Co., Inc.); Cooperative Recreation Service, Delaware, O. (installed by American Type Founders); and William S. Henson, Inc., Dallas, Tex. (installed by E. C. Palmer & Co., Ltd.) *"Twenty-two Special" Slot Rotary Perforators*—Central Printing Co., Louisville, Ky. (installed by American Type Founders); Advertising Production, Muskegon, Mich. (installed by Kalamazoo Printing Machinery Co.); Elling Printing Co., St. Paul, Minn. (installed by Perfection Type, Inc.); Div. of Employment Security, Unemployment Insurance Service, Trenton, N. J. (installed by E. P. Lawson Co., Inc.); American Enka Corp., Enka, N. C. (installed by Addressograph-Multigraph Corp.); Provident Life & Accident Insurance Co., Chattanooga, Tenn. (installed by American Type Founders); First American Insurance Co., Houston, Tex. (installed by Addressograph-Multigraph Corp.); and Heyrman Printing Co., DePere, Wis. (installed by Western Newspaper Union). *Gang Stitcher* — Central Publishing Co., Indianapolis, Ind. (installed by American Type Founders). *Multiple Check Perforator* — American Bank Stationery Co., Baltimore, Md. (installed by J. C. Niner Co.). *Pony Vari-Speed Rotary Perforator* —Textile Marking Machine Co., Inc., Syracuse, N. Y. (installed by J. & F. B. Garrett Co.).

High Shrink Techniques

(Continued from Page 39)

(2) To obtain maximum bowl depth without damage to serifs, italics, or the finer faces.
(3) To obtain maximum compression of the mat at the printing surface in order that the plate surface may be as free from imperfections as possible.
(4) To give even compression on both halftone and type surfaces and nullify drop-out on the plate of halftones and solids.
(5) To allow maximum flexibility of the combination in order that changes may be made to compensate for factors that the stereotype department cannot control.

Drying of Mold

The second of the three most important operations is the drying of the mold. Here we have an operation that can destroy all the foregoing effort of proper form preparation, proper molding and full adherence to fundamentals. On the assumption that all of you are using vacuum type mat formers with heat on both the base a chamber, a proper relationship must be esestablished between the heat of the base and the heat of the chamber. The use of a quick reading contact pyrometer is ideal for this purpose. Depending upon the condition of your drying equipment and whether or not you keep it maintained to the standards contained in the instructional manual that came with it, this relationship should be within approx. 75 deg. to 90 deg. Thus, if the base is being carried at 350 deg. the chamber should be carried at approx. 260 deg. to 275 deg. Secondly, in this operation the length of time is of utmost importance. A low heat and longer time with adequate vacuum will greatly benefit retaining the reproductive values obtained by the adherence to proper molding procedures. Now, which one of you will be the first to say: "I can't take the extra time to dry my mats slowly?" As long as you stay even with your casting boxes or ahead of them you can afford the extra time. This is where your employer comes into the picture. The purchase of additional drying and forming equipment will often allow you to overcome this bottleneck and trouble making spot in your operation.

Metal Temp. and Box Cooling

The third and last of the critical operations is two-fold: Metal temperature and casting box cooling. For proper results they are inseparable. Based upon sound metallurgical practice for white metals, the lower the casting temperature for the stereotype alloy and the more rapidly the printing surface can be solidified, the finer the crystalline structure, and the more ink receptive the surface of the plate.

The basis for the above is the estab-

NOW!
TWO ROUSE TIME-SAVING
PLATE SAWS
With Exclusive Automatic Feed
For Photoengravers,
Stereotypers, Printers

No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.
2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.
3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.
4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

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ROUSE PRODUCTS...The Standard of the World Since 1899

Automatic Metal Pump

FOR BETTER, MORE ECONOMICAL CASTING OF FLAT, TUBULAR SEMICYLINDRICAL STEREOTYPE PLATES

Let us tell you how the International Electro-Pressure Automatic Metal Pump can save fuel, metal and time... and give you infinitely better castings. It certainly will pay you to investigate today.

INTERNATIONAL NEWSPAPER SUPPLY CORPORATION

134 N. LaSalle St. Chicago 2, Illinois

lished fact that in a 6% tin, 13½% antimony, balance lead alloy, the crystalline structural formations begin at 535 deg. These crystals are extremely fine, consequently they remain closely knit and compact if brought through the eutectic state to solidification as rapidly as possible.

This leads us to the conclusion that the jacket of the casting box should be maintained as cold as possible, consistent with the necessity of high production and the cylinder or core of the machine at an elevated temperature that will allow normal operation. Again these factors must be determined in your own plants.

It might be of interest to you that plates cast according to the method just outlined show a difference of five Brinnell numbers between the printing surface and the ribbed or inside surface of the plate, the printing surface being the hardest. Upon reversing the temperature conditions, that is, having the core or cylinder as cold as possible and the jacket approximately 150 deg., the ribbed portion of the plate is four Brinnell numbers harder than the printing surface. You can readily understand that increased plate life under proper conditions of casting temperature and cooling standards is the reward for applying the foregoing procedures.

The foregoing outline of requirements holds true for any shrinkage operation, high or low. An honest appraisal of highly hydrated mats will show certain superior characteristics over the low moisture mats of previous years. They are a softer, more plastic reproductive medium than we have ever had. This means we can, with proper molding, force the surface into the finest of halftone shadow dots, obtain greater bowl depth in the type, compress the solids and shadow areas to the point where they will not drop out on the cast plate. All this is obtainable without crushing type and spreading highlight dots.

Eventually, the mat manufacturers will give us an ideal product. When that time comes the onerous work in stereotyping will be gone. The transitional period will be at an end. No longer will we be able to say "It is the fault of high shrinkage," or to the pressmen, "There's nothing wrong with those plates, put on a little impression."

Rotary Letterpress

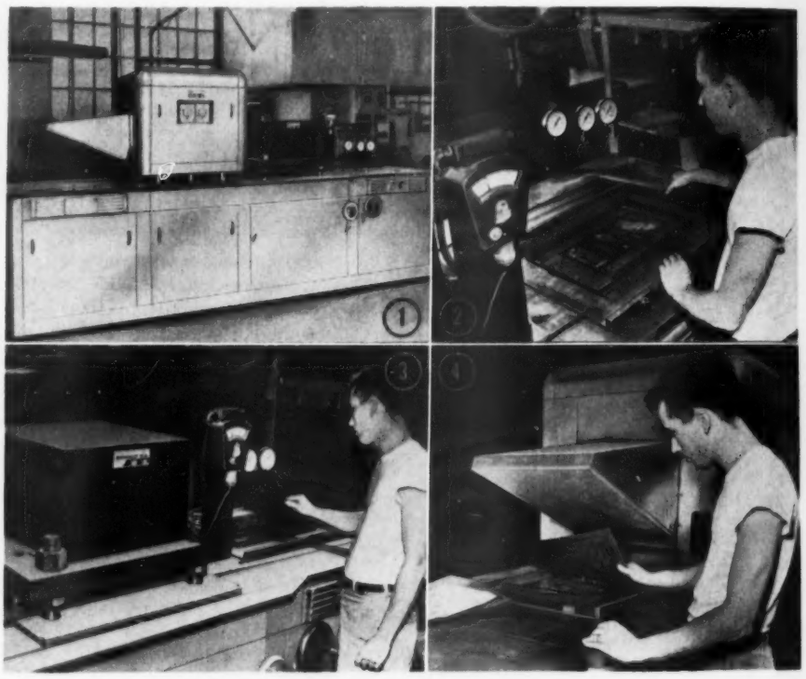
(Continued from Page 37)

Mr. Horton's personal preference was for the two-sided mat. He used only the face mat at Kable's but at Capper Publications, he has been using the two-sided mat and likes it better. "It carries the type and shadows in the travel line, with highlights below and solids above," he commented.

At Meredith's, Mr. Albaugh tried both and is using one treater mat for economical reasons. The two-sided mats take more time in treating plates, he explained. "We use the single mat except for some stock, in which case we use the two-sided mat."

"We try to consider treater mats as a tool and use either the single or the double depending on the nature of the subject treated," said Mr. Sauer of McCall's.

The treater mat at Hall's is cut so that the type and highlights are at the low level of the plate, the middletones



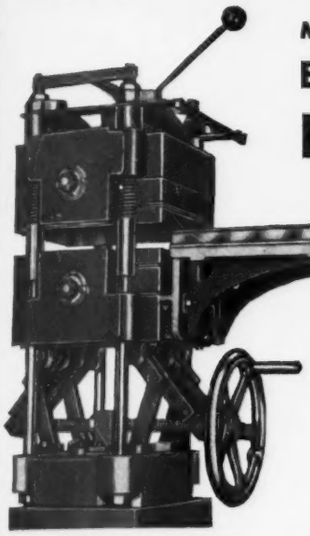
Monomelt Automatic Electrotype Molding Press—The four stations of the Monomelt 101-B Automatic Electrotype Molding Press, announced by the Monomelt Company, are shown in Fig. 1. The form to be molded from is moved from right to left by the automatic carrier bar at the start, into the 30 T. press, then to the 200 T. press and finally to the cooling table. All four stations can be operated simultaneously, enabling one to four molds to be processed through the unit at one time. Sponsor states all pressures, temperatures and time cycles are controllable to fit the type of material being molded.

The form to be molded from is shown in Fig. 2 on special magnesium trays with pressure-controlling bearers. The Vinylite sheet, Holland cloth, blankets, etc., are placed in position and the carrier bar placed behind the tray. The automatic cycle is started by pushing a switch.

In Fig. 3 the automatic carrier bar is shown moving the form into the 30 T. press where it is pressure heated for 90 sec. The carrier bar then moves the form to the 200 T. unit, (shown at top left of center in Fig. 1) where the mold is formed and chilled in the next 90 sec. time cycle.

The final operation is shown in Fig. 4 with the work moving to the cooling table where the carrier automatically stops the tray containing the form, Vinylite molded sheet and molding combination. Additional information will be provided about this press by mentioning PEE No. 818 in your request.

CUT COSTS — PRINT WITH
RUBBER PLATES
MAKE THEM IN THE
EASY-TO-OPERATE
EVA-PRESS



Materials Cost Less Than $1.25 For 10"x10" Plate

1. Insert type form and plastic sheet into hot Eva-Press, apply pressure, let cure for 10 minutes.
2. Release pressure, extract all from Eva-Press and have finished matrix.
3. Place (1) sheet of rubber on (2) matrix and insert both into hot Eva-Press, apply pressure, let vulcanize for 10 minutes.
4. Release pressure, extract all from Eva-Press and have finished Rubber Plate. More detailed directions supplied with Eva-Press.

• PLATENS 11"x13"
• INSIDE CHASE 10"x12"

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To be doubly-sure of sufficient stereo depth, which is so essential to quality newspaper printing, users select dependable Wood Dry Mats.

WOOD FLONG
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HOOSICK FALLS, N. Y.

WOOD DRY MATS

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551 FIFTH AVENUE, NEW YORK 17, N. Y.

at the second level, and solids at the high level. Whenever vignette edges occur, an extra sheet is added to bring them below the type and highlight level. Larger areas of type matter are brought up to the middletone height. A 2 pt. sheet is pressed onto the top of the treater for protection. The treater mat is matched to the face of the printing plate by register marks cut in appropriate places in the treater.

Hall's Stereotype Treaters

A mat is made on a heat resisting tag manila with a top sheet of 3 pt. duplicate stock. Paper 1½ pts. thick is pasted to the mat, increasing for the different steps wanted in the treater mat. The treater is then matched to the back of a stereotype mat. The plate is cast with a treater attached to the mat. The treater is removed after the plate is cast and is used again on the face of the plate in the shaving operation.

Curved Versus Centrifugal Casts

Only opinions, not factual data, presently exist on the merits of the curved cast plate versus centrifugal cast plate. Mr. Sauer reported that McCall's use Hydrocasts and Centrifugal casts.

"If you allow for stretch, you get more uniformity with the free curve," commented a platemaker.

To the question, "After 6 hours can you treat a plate that has been centrifugally cast?" came answers: (1) The right way is the old McKee system, where time made no difference and (2) Present plates should be treated within 2 or 3 hrs.

"Proper leveling up forms the basis of a good printed job. It is the most important step in makeready," said Mr. Knol. At Hall's completed plates are delivered to the overlay department where they are proofed for tooling and checked for proper treatment. Markers are checked and plates underlaid, ready for the pressroom. After the plates are put on the press, two-sided sheets are pulled for position OK and corrections. A one-sided sheet is pulled for level-up purposes. Additional sheets are pulled for register purposes. After register is completed and color checked, copies are pulled for overlays. These overlays are marked out and hung in if necessary. Jobs are often started without incorporating the overlay sheet until some hours later. When the sheet is to be hung in, color is rechecked and the press restarted at slow speed for a minimum run. The general run is begun after inspection for general fix-ups, hard edges and plate defects.

Packing at Meredith

"We do not use marked out overlays," said Mr. Albaugh. Meredith has five two-color presses on which marked overlays could be used but they find the manila base packing with a rubber coated top sheet satisfactory. Occasionally a pressman wants to go back to the all manila packing. "We let him," said Mr. Albaugh, "but he soon comes back to the manila base with the rubber coated top sheet."

According to Meredith's experience, the advantages of this type of packing are: It helps smooth out the job without a lot of pressure; cuts down 75% on cracked plates; prints vignettes better than hard packing; the men used to have to change packing every shift the old way, but go three or four days before a change is necessary now.

Mr. Albaugh admitted wrinkle troubles. "When we print on rubber, two travel lines are created on paper." By using a rubber top sheet and either tympan brown or Minnesota Mining glass bead blanekt, some of the wrinkle troubles are prevented. "What happens when you use hard packing?" someone asked Mr. Albaugh. He replied: "Seven years ago, we put in a web 5-color press. The paper was fairly good. If it wasn't smooth, we tried to make it smooth by using pressure. As a result the plates were driven into the grooves of the cylinder. The packing would be damaged on every shift."

Uniform Manila Sheet Needed

The industry needs a uniform manila sheet, it was reported. One of the companies is playing around with acetate which appears to have more uniformity.

Factual Molding Data Needed

Those favoring lead were quick to support their choice with statements such as these: (1) Lead is a denser metal and is not subject to the expansion that plastic is; (2) We have been more successful with lead than with plastic; (3) Plate casts with lead are better because the shell is heavier; (4) Unless you are exceptionally skillful, you get a shallow mold much quicker with plastic than with lead; (5) We use lead on four color work, but the

Tempo Black Condensed

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Ludlow Typograph Company

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customer has to pay extra, and (6) We mold everything in lead that we can.

Those favoring plastic said: (1) We can mold everything in Vinylite and that is more than we can say about lead; (2) All of our top quality work is molded in Vinyl; (3) Lead isn't sufficiently better than plastic to merit its use exclusively, and (4) Register from plastic is just as good as from lead molds.

Broken Makeready

Broken makeready is no problem where pre-established standards are in effect. Standard Register retrained its journeymen to follow set makeready procedure. The men come in 15 min. early on each of the three shifts to review written forms found at each press which indicate what has been done, what needs to be done, etc. A written resume is handed to the night supervisor at The Case-Hoyt Corp., Rochester, N. Y., so he knows how far makeready has progressed.

Mr. Maxwell of W. F. Hall Printing Co. holds supervisors responsible for broken makeready. Pre-established methods aid him.

Conference Dates

(With Organization Names and Principal Officers)

American Photoengravers Assoc. — 1954 Conf., Hotel Jefferson, St. Louis, Mo., Oct. 11, 12, 13. Pres., D. H. Murnik, Oakland National Engraving & Gravure Co., 307 Tenth St., Oakland 7, Calif.; Exec. Secy., Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf. — 1954 Conf., Chalfonte-Haddon Hall Hotel, Atlantic City, N. J., June 7, 8, 9, 10. Chairman of the Committee, Joseph E. McMullen, Prod. Mgr., Milwaukee (Wis.) *Journal;* Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute — 1954 Spring Meeting, Plaza Hotel, Apr. 8. Pres. Sidney Satenstein, American Book-Stratford Press, Inc., 75 Varick St., New York 13, N. Y.; Secy., Miss A. G. Watson, same address as above.

Fifth District Craftsmen's Conf. — 1954 Conf., William Penn Hotel, Pittsburgh, Pa., June 11, 12. Pres., Robert Edgar, Pres., Neyhart Printing Co., 244 Blvd. of the Allies, Pittsburgh, Pa.; Secy-Treas., Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, Ohio.

Graphic Arts Trade Assoc. Executives—1954 Conf. Sinton Hotel, Mar. 27,28, Cincinnati, O. Pres. Richard A. Stout., Exec. Dir., Printing Industry of Atlanta, 881 Piedmont Ave., N.E., Atlanta, Ga.

Gravure Technical Assoc. — 1954 Annual Meeting, Hotel Biltmore, New York, N.Y., Feb. 3, 4, 5. Pres. John E. Hazel, New York *Daily News,* 700 Pacific St., Brooklyn 17; Secy.-Treas., Frank Sportelli, International Color Gravure, 39 W. 60th St., New York 23, N. Y.

Great Lakes Newspaper Mechanical Conf. —1954 Conf., Claypool Hotel, Indianapolis, Ind., Jan. 10,11,12. Pres., Horace Parker, Press and Stereotype Fm., Richmond (Ind.) *Palladium-Item;* Secy.-Treas., Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press;* Chairman Mfrs. and Suppliers Committee, Joseph W. Kaercher, Linotype Representative, 5311 Broadway, Indianapolis, Ind.

Illinois Newspaper Mechanical Conf. — 1954 meeting, Hotel Custer, Sept. 25-26, Galesburg, Ill. Pres. Eldon L. Martin, Galesburg (Ill.) *Register-Mail;* Secy.-Treas., Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.

Intl. Assoc. Electrotypers & Stereotypers — 1954 Conf., Greenbrier Hotel, White Sulphur Springs, W. Va., Oct. 28-Nov. 1. Pres., Carl N. Becker, Becker Electrotype Co., 144 N. Water St., Milwaukee 2, Wis.; Exec. Secy., A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen — 1954 conv., Bellevue-Stratford Hotel, Philadelphia, Aug. 8-11. Pres., Howard N. King, The Maple Press, York, Pa.; Exec. Secy., Pearl E. Oldt., Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.; Convention Chairman, Ray Miller, 300 Valley View Rd., Media, Pa.

Intl. Graphic Arts Education Assoc.—1954 Conf., University of Colorado Campus, Boulder, Colo., early in July, exact dates to be announced later. Pres., Patrick F. Boughal, New York School of Printing, 461 Eighth Ave., New York 1, N. Y.; Exec. Secy., Samuel S. Burt, 719 Fifteenth St., N. W., Washington 5, D. C.

Intl. Typographic Composition Assoc. — 1954 Conv., Hotel LaSalle, Chicago, Sept. 23, 24, 25. Pres., Harold L. McGirr, Morris & Walsh Typesetting Co., Inc., 129 Lafayette St., New York, N. Y.; Frank M. Sherman, Exec. Dir., 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf. —Secy.-Treas., Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—Secy.-Treas., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan.; Sec'y., William Bray, Missouri Press Assoc., Walter William Hall, Columbia, Mo.

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Lithographers National Assoc. — 1954 Conv., The Greenbrier, White Sulphur Springs, W. Va., June 8,9,10. Pres., William H. Walters, President, United States Printing and Lithograph Co., Old Country & Glen Cove Rds., Mineola, L. I., N. Y.; Exec. Dir., W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conf.—1954 Conf., Penn Harris Hotel, Harrisburg, Pa., Mar. 18, 19, 20. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conf. Dir., Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs — 1954 Conv., Hotel Biltmore, New York, N. Y., May 7,8. Pres., Andrew Balika, Supt., Copifyer Lithograph Corp., 1771 E. 24th St., Cleveland; Exec. Secy., Sol D'Allesandro, Supt., Horn & Norris, Inc., 2729 Prospect Ave., Cleveland.

National Assoc. of Photo-Lithographers—1953 Convention, Sheraton Hotel, Chicago, Oct. 28,29,30,31. Pres., A. J. Fay, 75 Varrick St., New York, N. Y.; Exec. Vice Pres., Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc. Pres., Robert B. Tullis, Pres., Miller Printing Machinery Co., 1101 Reedsdale St., Pittsburgh 33, Pa.; Secy., James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Div.—Gen. Chairman, Peter J. Bernard, Director of Personnel and Safety, H. Wolff Book Mfg. Co., 508 W. 26th St., New York 1, N. Y.; Staff Rep., Fred Lubet, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf.—1954 meeting dates to be announced later. Pres., J. William Powers, Mech. Supt., Burlington (Vt.) *Free Press;* Secy.-Treas., Walter C. Crighton, Comp Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conf.—1954 Conf., Radisson Hotel, Minneapolis, Minn., Feb. 27,28, and March 1. Pres., John R. Copeland, Production Mgr., Minneapolis (Minn.) *Star* and *Tribune;* Secy.-Treas., Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conf. — 1954 meeting, Multnomah Hotel, Portland, Ore., Sept. 17-19. Pres., Wm. E. Gibbons, Prod. Mgr., Portland (Ore.) *Journal;* Secy., Don Newhouse, Prod. Mgr., Portland (Ore.) *Oregonian.*

Printing Industry of America—1954 Conf., Hotel Statler, Detroit, Mich., Nov. 15-19. Pres., James J. Rudisill, Rudisill & Co., Lancaster, Pa.; Gen. Mgr., James R. Brackett, 719 Fifteenth St., N.W., Washington 5, D. C.

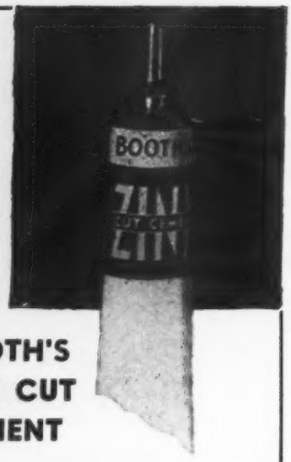
Research and Engineering Council of the Graphic Arts Industry, Inc. — 1954 annual meeting, Kalamazoo, Mich., May 11-12. The 1955 meeting to be held on May 12-13, city and hotel to be announced later. Pres., Edward J. Triebe, Vice Pres., Kingsport Press, Kingsport, Tenn.; Exec. Secy., John Reed, 719 Fifteenth St., N.W., Washington 5, D. C.

Screen Process Printing Assoc.—1953 Conv., Statler Hotel, New York, N. Y., Nov. 1,2, 3,4. Pres., Joseph Grossman, Masta Displays, Inc., 230 W. 17th St., New York 11, N. Y.; Secy., Dan Novak, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1954 Conf. tentatively set for Aug. 23, 24, Montgomery, Ala. Exact dates and hotel to be announced later. Conf. Chairman, C. Leroy Ray, Mechanical Supt., Winston-Salem (N. C.) *Journal* and *Sentinel;* Secy., Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman of Mfrs. and Suppliers Group to be announced later.

SNPA (Western Div.) Mechanical Conf.—1954 Conf., Hotel Marion, Little Rock, Ark., March 7-9. Chairman, Palmer Black, Mechanical Supt. Amarillo (Tex.) *Globe-Times;* Secy., Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman of Supplymen's Committee, Karl L. Ponath, Mgr., Mergenthaler Linotype Co., 514 Browder St., Dallas 1, Texas.

Technical Assoc. of the Graphic Arts—1954 Conv., Schroeder Hotel, Milwaukee, Wis., May 10, 11. Pres., Richard F. Shaffer, Pratt Institute, 215 Ryerson St., Brooklyn 5, N. Y. Secy.-Treas., Paul J. Hartsuch, Printing Ink Div., Interchemical Corp., 161 W. Harrison St., Chicago 5; Convention Chairman, J. L. Roser, Milprint, Inc., 4200 N. Holten St., Milwaukee 1, Wis.



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Aluminum Presensitized Plates

Presensitized aluminum offset plates has been announced by F. W. von Meister, President of Azoplate Corporation. Manufacturer states one solution is required for development after exposure. Once the plate is exposed, it is stated, the solution desensitizes, developes, etches, and gums the plate for immediate press readiness. The plates are claimed to have a long shelf life and are dependable for either reruns or long runs. Plates are available in sizes up to 25½ in. by 36 in. By mentioning PEE No. 740 further information will be sent gladly.

NEWS ITEMS

Clark Appoints Crunkleton Co. — Clark Equipment Co. has appointed the Crunkleton Co., 5324 McCorkle Ave., S.E., Charleston, W. Va., distributor of Clark's materials handling equipment. The new dealership is under the management of Leslie D. Crunkleton, jr.

Appoints Sales Manager — Ralph V. Coles, Asst. Vice Pres. of Robertshaw Fulton Controls Co., announces the appointment of R. M. Stotsenburg as Sales Mgr. of Fielden Instrument Div. He studied Business Administration at the Wharton School, University of Pennsylvania.

Reliance West Coast Expansion — Reliance Electric and Engineering Co. in its engineering and technical service facilities on the West Coast will include establishment of a direct factory sales office in San Francisco and additions to its engineering personnel in both San Francisco and Los Angeles, it was announced by Sales Vice Pres. E. E. Helm. The new sales office will serve accounts in Northern and Central California and Northwest Nevada, including those formerly served through the offices of the Fred G. Gurthrie organization of San Francisco.

J. W. West, Gen. Mgr. of Kingsport (Tenn.) *Times-News* for more than 13 years, as of Oct. 1, left that company to engage in newspaper consultant work. His address is Newspaper Consultant Service, 1507 M St., N.W., Washington, D. C. West will handle management, typography, personnel, finance, appraisals, consolidations, circulation, advertising promotion and other problems of the newspaper industry.

Quicker Press Delivery — The Miller Printing Machinery Co. has completed its contract for several thousand 90 mm. gun mounts for the M-47 tank and is now able to devote all of its productive capacity to the building of printing presses, according to R. B. Tullis, President of the firm. It is anticipated that the freeing of men and machines from defense work will enable Miller to reduce present large backlog of orders for letterpress and offset presses and restore press deliveries to a normal basis.

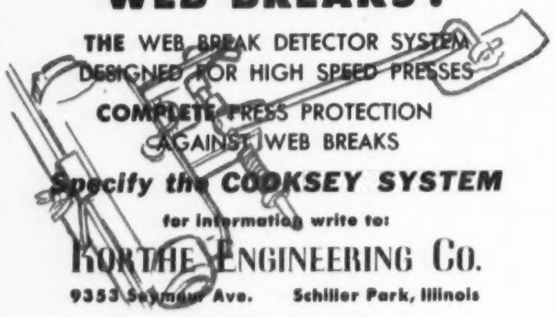
A. H. (Jack) Parks, former President of Cline Electric Mfg. Co., Chicago, his many friends throughout the country will be glad to learn, is making satisfactory progress with respect to recovery. Letters written to his friends indicate that Parks is now greatly encouraged even though progress is slow. Those wishing to get in touch with him may do so by writing 618 Shabbona St., Ottawa, Ill.

Roy Bensing, one of the founders and owners of Bensing Bros. & Deeney, printing ink makers, died on Sept. 27 after a brief illness. He was 56 and resided in Haddonfield, N.J. Mr. Bensing had been in the ink business for 42 years. In 1936, together with his brothers, Harold and the late Earle Bensing, and James J. Deeney, he formed Bensing Bros. & Deeney.

Bensing Brothers and Deeney has announced the opening of a new plant at 707 Park Ave., Monroe, La. The plant will be under the joint direction of Walter Baylor and Cyril Epler. The Monroe plant will serve the states of Louisiana, Texas, Alabama, Tennessee, Mississippi, Oklahoma and Arkansas.

All Vacancies Filled at RIT—All existing vacancies in the freshman class have been filled with 96 entering students enrolled in the Department of Printing at Rochester (N.Y.) Institute of Technology, according to Byron G. Culver, head of the department. Re-registering as upper-

WEB BREAKS?



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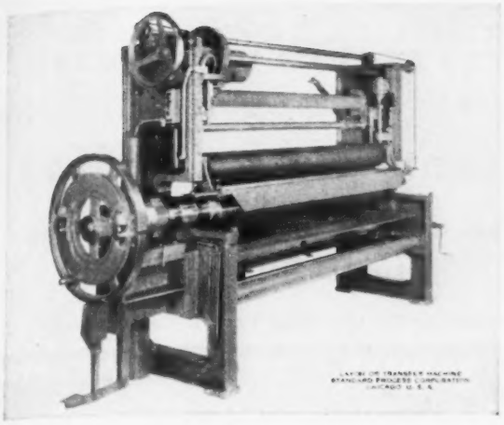

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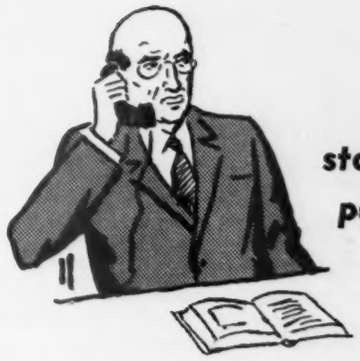


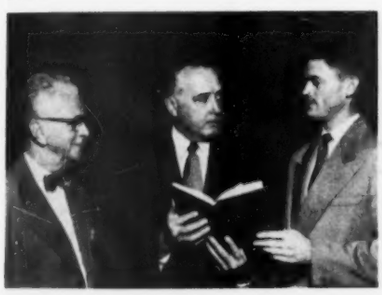
When the store manager's paper was late

—he jumped to the conclusion that everybody's paper was late and that carefully planned advertising would get only hasty attention. Of course he complained.

Throughout a paper's territory there are hundreds of eager watchers to whom prompt delivery of papers is a matter of dollar income. Publishing concerns that set due weight on regularity often prefer dependable Certified Mats.

For dependable stereotyping, rely on Certified Mats **Certified DRY MATS**
CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

classmen were 65 students, making a total of 161. Students entering the Department of Printing this year will have a dual education in letterpress and offset-lith.



Columbia Scholarships — The establishment of four scholarships for students of the new Graphic Arts Center at Columbia University by Kurt H. Volk, Inc., typographers of New York, N. Y., was announced recently by Dr. Grayson Kirk, President of Columbia. The value of the scholarships was reported to be the equivalent of a $20 thousand endowment fund. Shown above is Dr. Kirk (center) congratulating Frank Pulliam (right), winner of the first scholarship, as Kurt H. Volk looks on.

Linotype Times Roman, produced by Mergenthaler Linotype Co., was chosen as the type face for the new, condensed Columbia-Viking Desk Encyclopedia being printed by the Viking Press, New York, N.Y. The condensed edition contains 1101 two col. pages compared to the original volume of 2203 three col. pages. It was stated the 8 pt. Times Roman face was selected in order to reduce the encyclopedia to more manageable proportions for desk use.

Go to Morris & Walsh—Harold L. McGirr of Monotype & Linotype Composition Corp., New York, N. Y., and Edward F. McDermott are now associated with Morris & Walsh Typesetting Co., Inc., New York, N. Y. McGirr is Vice President and McDermott is in charge of production. McGirr was elected President of the Intl. Typographic Composition Assoc. at its recent annual convention in Washington, D. C.

ARCHER

Alfred H. Archer has been appointed Asst. Sales Mgr. of Linotype Parts Co. as announced by I. Bendow, President. Archer studied journalism at Washington & Lee University. He worked with Linotype & Machinery, Ltd., in England for a time. In 1934 he joined the Foreign Dept. of Mergenthaler Linotype Co. Recently he was a supervisor in Mergenthaler's advertising department.

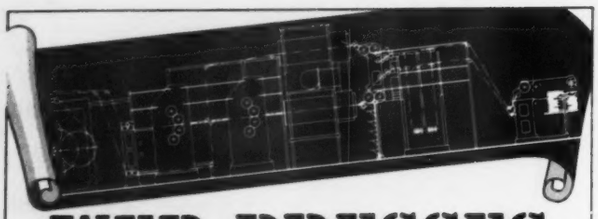
Propose Graphic Arts Degree — In talks given recently by Fred Hartman, Education Director, and Samuel Burt, Exec. Secy., Education Council of the Graphic Arts Industry, Inc., before a meeting of the Los Angeles Printing Industries Assoc., the speakers called for establishment of a Graphic Arts course offering a degree in one or more Southern California colleges. Only 12 universities out of 70 give a Graphic Arts degree, said the speakers.

FURLONG

Ralph Furlong has been appointed Sales Representative for the Southern District of J. M. Huber Corp.'s Ink Div., it has been announced by Louis A. Lara, General Sales Mgr. Furlong will work under the direction of E. Guy Myover, Southern District Sales Mgr., in St. Louis.

E. G. Staude Mfg. Co., St. Paul, Minn., has been formed as a new corporation succeeding the E. G. Staude Div., The Sperry Corp. The new firm was purchased from Sperry by Bryant Chucking Grinder Co., Springfield, Vt. It was stated that the Staude company will continue with the same operating personnel and the same line of products. Staude's executive personnel will be as follows: J. H. Beardsley, President; Samuel K. Lynn, Exec. Vice Pres. and Resident Mgr.

Harvey Boyd, formerly of San Francisco, has been appointed Mechanical Supt. of the Hilo (Hawaii) *Tribune-Herald,* according to Lester A. Carpenter, Mgr. Robert Reves of Hanford Calif., is now Comp. Room Fm. Carpenter states plant expansion plans include a 32-page Hoe press with color attachments and a Fairchild ScanA-Graver.



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Heidelberg Cleveland Pressmen's School—Shown here at the Heidelberg Pressmen's School held in Cleveland Sept. 14 through Oct. 15 are (left to right): John Gross, Instructor; Jack Walsh, World Pub. Co.; L. M. Mugford, Cleveland State Hospital; George Doyal, World Pub. Co.; Steve J. Hubble, Wm. Feather Co.; Casimir Zale, United Pub. Co.; Wm. A. Hein, Hein Printing Co., and Tony Kulas, United Pub. Co. Approx. 50 pressmen from the Greater Cleveland area attended.

Other school sessions have been held in New York, New Haven, Boston, Providence, South Bend and Louisville. Enrollment is held to a maximum of 8 or 10 to insure individual attention for all students. Invitations are extended to all pressmen through their companies in a given area.

New Home for Huber Ink Div.—The Ink Div. of J. M. Huber Corp. has established headquarters in a newly-acquired building at 1478 Chestnut Ave., Hillside, N.J., it has been announced by Vice Pres. J. S. Hart. The move consolidates the Eastern District sales office, formerly located at 100 Park Ave., New York, N.Y., and the general and export offices and laboratories which had been in Brooklyn.

James Schwarz has been named Sales Mgr. of Leebaw Mfg. Co., Youngstown, O., according to an announcement by Pres. Herbert Leebaw.

Charles K. Rieck, Minneapolis, Minn., was recently honored by the Twin City Trade Composition Assoc. on his retirement after more than 30 years of service with the Lanston Monotype Machine Co. Recognition of Mr. Rieck's long service to the industry, as well as to his company, was accorded at a testimonial

dinner attended by over 100 of his close friends and associates. Participants in the affair included Roy L. Brewer, President, Duragraph, Inc., Minneapolis; Frank Tuma, President, Twin City Trade Composition Assoc.; Charles Phelps, Phelps Lino-Comp; S. Walter Sears, President, Mono-Trade Co., Minneapolis; and Carl C. Sorenson, Sales Mgr., Lanston Monotype Machine Co. Sorenson is shown at right presenting a framed portrait of the veteran Lanston employee to Mr. and Mrs. Charles K. Rieck.

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COUPON BRINGS DETAILS

Committee Discusses Program for Northwest Mechanical Conference to be held in Minneapolis, Feb. 27, 28 and Mar. 1. Left to right, members are: First Vice Pres., William Benson, St. Paul (Minn.) *Pioneer Press & Dispatch;* Conference Second Vice Pres. Edward O'Neill, Minneapolis (Minn.) *Star & Tribune;* George Curle of the same papers; Pres. John Copeland of the Minneapolis papers (seated); Conference Secy.-Treas. Ralph Carson, Instructor, Dunwoody Institute, Minneapolis; Joseph Cory, St. Paul (Minn.) *Pioneer Press & Dispatch,* and Vernon G. Eck, Dunwoody Institute, Minneapolis. The Composing and Photoengraving clinics will be headed by A. E. Rosene, Production Mgr., St. Paul (Minn.) *Pioneer Press* and *Dispatch.*

Albert Schiller (right) explains how his type pictures are composed to Walter Dorwin Teague, former president of the American Institute of Graphic Arts. Schiller's pictures are made up entirely of type ornaments used by printers and no additional art work appears in the composition. Although Schiller has been composing these pictures for more than 30 years, the first ones were not sold until the recent Antiques Fair in New York, N. Y. Proceeds of this sale reverted to the Graphic Arts Center program at Columbia University in order to catalog Columbia's Graphic Arts collections and to make them available to the industry at large.

Joins Chemco—William Clackworthy has joined the sales force of Chemco Photoproducts Co., Inc., Glen Cove, N.Y. He will represent Chemco in the New York, N.Y. area, working with customers on the selection and application of platemaking equipment and supplies. Mr. Clackworthy will make his headquarters at Chemco's New York offices, 235 Fourth Ave.

CLACKWORTHY

Linotypes in 3D—Three-dimensional full color views of linecasting machines were presented by the Mergenthaler Linotype Co. at the recent Pacific Newspaper Publishers' Associated Mechanical Conference in Los Angeles. Projected from stereopticon slides, the pictures included views of Wide Range Linotypes. Russell S. Stratton, Mergenthaler Director of Trade Relations, attended the conference.

HEMES

Reeves Brothers, Inc., has announced the acquisition of the Vulcan Rubber Products Corp., Brooklyn, N.Y., and Duroflex Incorporated, Buena Vista, Va. Both companies are producers of industrial coated fabrics and both will become separate corporate subsidiaries of Reeves Brothers, Inc. John M. Reeves will serve as president of the new subsidiaries. Other principals of the two firms are E. C. Hemes who will serve as Vice Pres. and General Mgr.; Dales J. McKnight, Sales Mgr.; and Carl Haas, Plant Mgr. Current plans are to continue operations in both locations.

Voight Receives Craftsman History Book—Elmer G. Voight (left) of Western Printing & Litho Co., Racine, Wis., receives a specially prepared copy of a book telling the history of the library of the Milwaukee-Racine Club of Printing House Craftsmen. The presentation was made by Past Pres. Victor Schwarze of The Krus Co., Milwaukee, at the September meeting of the club. Robert Konsin (center), President of the club, looks on. The book was printed in two colors and hand bound in morocco leather.

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MELBURN O. SIMMONS, Mid-West Manager, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

GEORGE GELL, Central District Manager, 1276 West Third St., Cleveland 13, O. Phone CHerry 1-6645.

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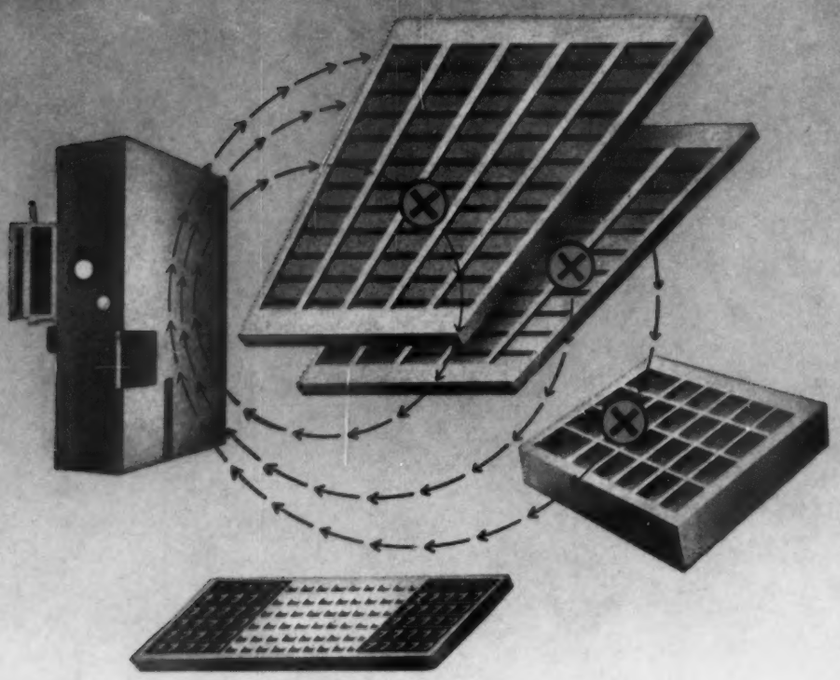

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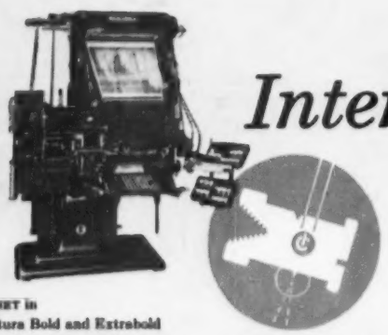

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